



# VIVEKANANDA COLLEGE OF ENGINEERING AND TECHNOLOGY

(A unit of Vivekananda Vidyavardhaka Sangha Puttur ®)

Nehrunagar, Puttur - 574203, D.K., Karnataka. Website: [www.vcetputtur.ac.in](http://www.vcetputtur.ac.in)

# Dhwani

Volume 4



DEPARTMENT OF  
ELECTRONICS AND COMMUNICATION ENGINEERING



## DEPARTMENT VISION

To produce comprehensively trained, innovative, technically competent, creative and socially responsible engineers contributing to nation's imprint on the world stage.

## DEPARTMENT MISSION

M1. Establish a unique academic environment to enable the students to Face the challenges of the electronics and communication engineering Field.

M2.To impart quality education on par with industry requirements through state of art infrastructure, highly qualified and competent Faculty.

M3. Build cutting edge technology hub adding to understudies making progress.

M4. To collaborate association with government, industry, society, alumni to promote entrepreneurship.

M5. Develop student centric methodology by creative teaching-learning environment.

## ABOUT THE DEPARTMENT

Electronics and Communication Engineering is a 4-year degree programme and to promote R&D, in the year 2013 a 2-year M.Tech programme affiliated to the VTU was started. ECE is the utilization of science and math applied to practical problems in the field of communications. It includes designing, fabrication, testing, maintenance, supervision, and manufacturing of electronic equipments in entertainment, media, hospitals (Medical Electronics), computer control systems, broadcast, communication systems and in defence. It also engage in research, design, development and testing of electronic equipment used in various communication systems. The defined courses aim to prepare students to play a leading role in the continuing adventure of modern communication, research, designing, building and marketing the next generation of products.





# PROGRAMME EDUCATIONAL OUTCOMES

## PEO-1

To have a strong foundation and ability to apply mathematics, science, engineering fundamentals and modern tools to analyze, design and implement the solutions to problems in the Electronics and Communication Engineering fields.

## PEO-2

Excel in professional career and/or higher education and/or entrepreneur by acquiring knowledge in area of Electronics and Communication Engineering.

## PEO-3

Analyze real life problems, design appropriate system to provide solution that are technically sound, economically feasible and socially acceptable.

## PEO-4

Exhibit professionalism, ethical attitude, communication skills, team work in their work in their profession and adapt to current trends by engaging in lifelong learning.





# Message from the Correspondent



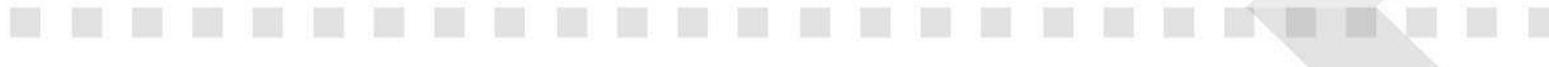
Vivekananda College of Engineering & Technology we aim to provide a broad, well balanced and relevant curriculum. We encourage positive social behavior, emphasizing respect for others. We value every student and have the highest possible expectations in the areas of achievement and behavior. Vivekananda College of Engineering & Technology provides a stimulating and enriched environment so that the student can enjoy all aspects of their learning. We value regular contact with parents/ guardians, and as an essential part of the education process. We are always looking for new ways to involve parents in the life of the college and to keep them informed of the things we are doing.

The Department of Electronics & Communication has given with excellent VTU result in the academic year 2017-18. I am very happy to see that department has brought fourth volume of department magazine "DHWANI". I wish all the best to Department and to all the students.

God bless you all.....

Best Wishes,  
*RuBhau*

Sri. Radhakrishna Baktha P.  
Correspondent  
VCET Puttur





## *Message from the President*



I am gratified to know that the department of Electronics and Communication Engineering is bringing out the fourth volume of their magazine "DHWANI" for the academic year 2018-2019. Students from the department of Electronics and Communication Engineering are more energetic and talented. The release of this spectacular Fourth volume of their magazine has added value to their constant efforts.

Through this message, I wish them "All the very Best" for their future endeavors to and hope the students of Electronics and Communication Engineering department bring more laurels to the college on the whole.

Best Wishes,

Sri. Sathish Rao P.  
President  
VCET Puttur





## *Message from the Director*



It was quite inspiring to watch and witness the potential of our students unfolding at various stages and situations each day. The staff have been supportive of the various activities that were undertaken by the students in view of helping them to reach the pinnacle of perfection and professionalism in whatever task they took on, thus strengthening our journey of achieving excellence.

The EC departmental magazine, "Dhwani" exemplifies the voyage transverse and exhibits the literary skills of our students as well as the staff. The students have been fostered to be humane professionals in every act.

Best wishes to our dear outgoing students of the EC Batch 2018-19. Congratulations to the editorial team for their determined efforts in bringing out this magazine.

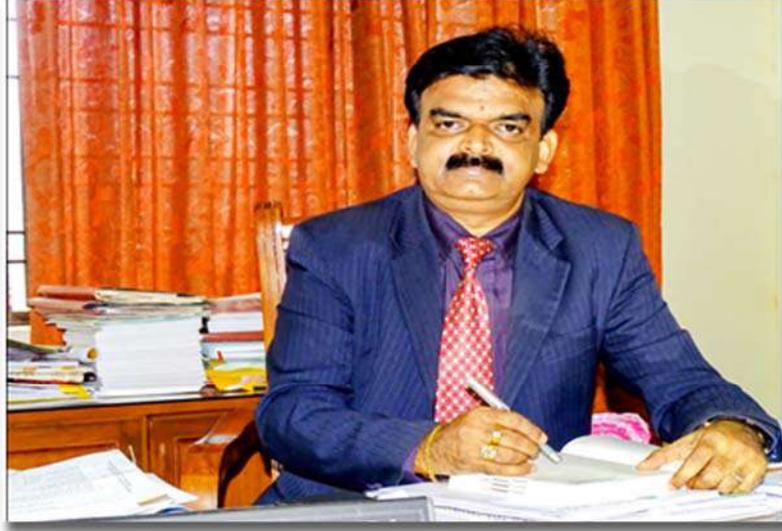
Best Wishes,

Sri. Ravikrishna D. Kallaje  
Director  
VCET Puttur





# Message from the Principal



I am happy that the Department of Electronics and Communication Engineering of our college is releasing the 4<sup>th</sup> volume of department magazine "Dhwani" 2019.

The department is releasing "Dhwani" with a view to promote literary, artistic and technical skills of the students by bringing out a professional collection of articles. I am happy to convey my greetings to the editorial team for their determined efforts in bringing out this magazine.

On this occasion, I am happy to convey my best wishes to the students and staff of the department for their future endeavors.

Best Wishes,

Dr. M.S. Govinde Gowda  
Principal  
VCET Puttur





# Message from the Head of Department

We are very happy to inform that our department is releasing fourth volume of department magazine "DHWANI", which highlights the academic and non-academic activities of both staff and students of the department.

Importance is given to quality teaching and learning process through faculty development programs for teachers and soft skill programmes for students. Special care is taken about the students whose performance is poor in the examinations through counseling and extra classes. There is continuous internal evaluation of students through internal assessment tests. The problems of students are to the extent possible as and when they arise. The attendance and progress reports are sent to the parents after every internal assessment tests. The parents of weak students are informed about their status through telephone calls.



The students are encouraged to participate in seminars conducted by other Engineering Colleges. Many students presented their papers of hobby projects which attracted attention in neighboring colleges and in the society. They are also made to participate in the activities such as debate, extempore, group discussion and Quiz. At least three expert lectures are arranged every semester by experts from industries and leading educational institutions on advance topic to the benefits of both staff and the students. The staff members are encouraged to attend national and state level workshop to enhance their knowledge.

Every effort is made to constantly improve the results of the students. I am very happy to inform that due to the concerted efforts of both staff and students, the results are very encouraging this time in all the semesters. At this moment I am very happy to announce that our 2018 batch got excellent result in VTU exam.

Most of the final year students are well-placed in reputed organizations like Infosys, Wipro, TCS, Robosoft Technologies, SLK Software etc, and few of them are planning to do their higher studies in reputed institutions.

Best Wishes,

Prof. Shrikanth Rao S.K.  
HOD, Dept of EC  
VCET Puttur





## EDITORIAL

The department of EC, Vivekananda College of Engineering & Technology, Puttur has successfully released its annual magazine, "Dhwani". We consider the magazine as a very successful achievement. The editorial board would like to thank whole EC dept. for sending their valuable articles for publishing in this magazine. In addition to the articles, this magazine would serve as a platform for sharing alumni-department related information with all VCETians. This edition of the magazine will carry the information about all the events organised by the department in academic year 2018-19.

We're going out happy with so many talents with us like poets, artists, photographers, editors and others. We would like to thank all for their priceless contribution towards the success of this magazine. We hope you enjoy reading this issue as much as we have enjoyed making it.

We appreciate your support and are so happy to have you as a reader of fourth issue of our department magazine "Dhwani". Let us meet and share frequently for each others betterment and joy.

With warmest thanks,

Team "DHWANI"

### Editorial Board



**Chief Editor**

Prof. Shrikanth Rao S.K.  
Assistant Professor & Head  
Dept. of EC



**Editor**

Mrs. Nisha G. R.  
Assistant Professor  
Dept. of EC



**Co-Editor**

Mr. Rajesh A.B.  
Lab Instructor  
Dept. of EC



**Associate Editor**

Ms Harshitha K K  
Student  
Dept. of EC



## ALUMNI TALK

A weak link is better than a strong memory. Nothing exemplifies it better than the nostalgic feeling one gets when leafing through the dusty old pages of his/her Department magazine.

It can make a reader travel down the lanes of memory, giving rise to a surge of emotions of many hues and colors. VCET EC Department's "Dhwani" is going to give the same pleasure to all the brilliant minds who traverse through the portals of this temple of learning.

We are happy to see the amount of enthusiasm of eminent members of the department to contribute to the magazine. Not to be outdone, our students have devoted time and plunged into Heart-warming Poems, Vivid Drawings and Informative Articles, Creative Photographies.

I stand awed by the sheer number of articles that have come pouring in for the magazine. This shows the positive and creative energy of faculty members and students present in the college.

We proudly publish the department magazine in order to show to the outside world, and also to remind the denizens of VCET, the progress we have made so far in the department.

It is always a pleasure to be a part of a team which strives to bring out the talents of students and staff. Vivekananda College of Engineering & Technology has always been striving to keep itself ahead of the competition and the results are now for everyone to see. The essential purpose of a department magazine is to inform, engage, inspire and entertain a diverse readership including alumni, parents, students, faculty, staff and other friends of the college by telling powerful stories that present a compelling, timely and honest portrait of the college and its extended family.

We intend to continue presenting the talent and creativity of our staff and students through "Dhwani" every year. I invite you to read and immerse yourself in the unfolding art and be exulted.

### Alumni Cell Coordinators

Mr. Vinay P  
*Asst. Professor*  
*Dept. of EC*

Mrs. Nisha G R  
*Asst. Professor*  
*Dept. of EC*



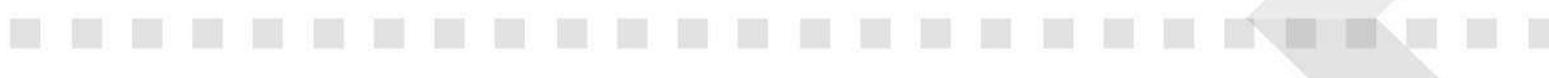
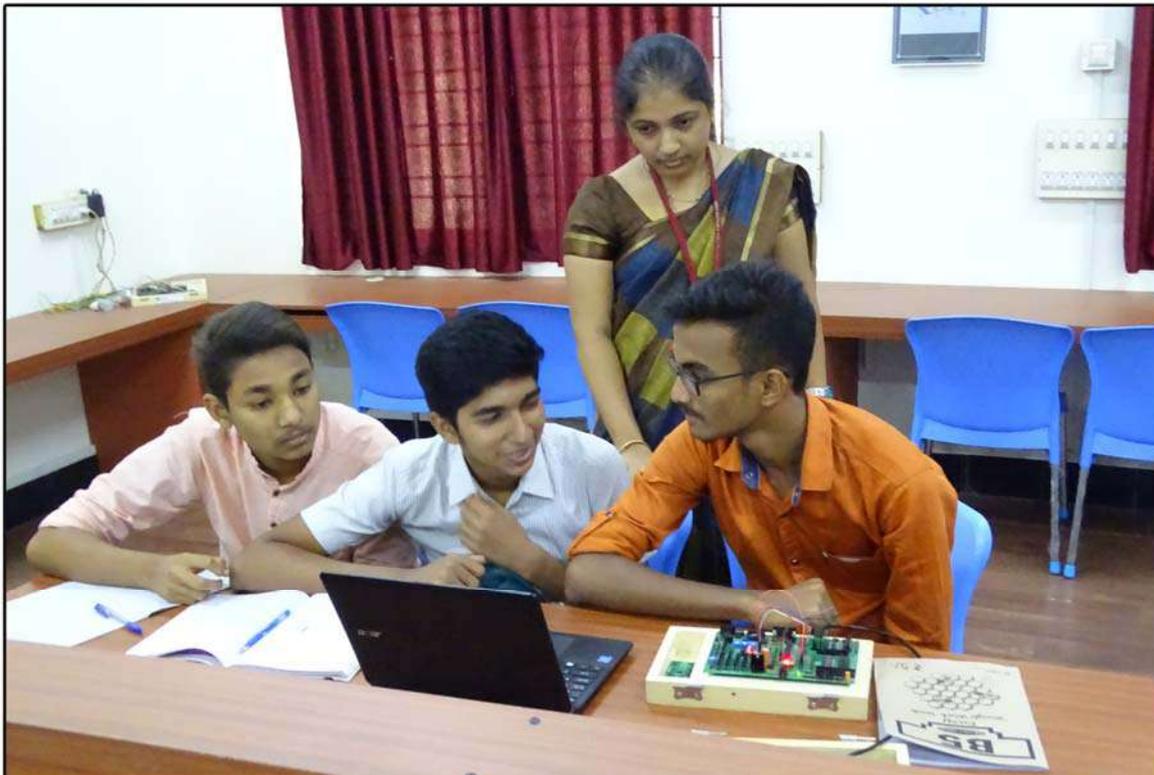


## STUDENT ACTIVITIES

- Department of Electronics and Communication Engineering in association with Association of Electronics & Communication Engineering (AECE) organized AECE Inauguration & Branch Entry on 30<sup>th</sup> August 2018.



- Exposure to the concepts of Electrical & Electronics Engineering related to automotive electronics was arranged for the II PUC science students of Government PU College Kombettu on 31st October 2018.

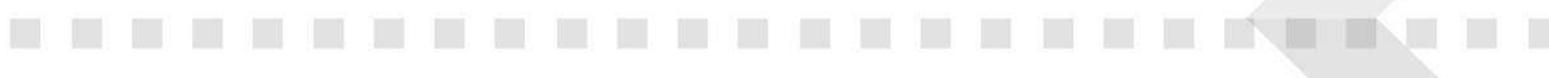




- Association of Electronics and Communication Engineering conducted an interactive session on 23-08-18 on sensors used in industry with 5th Sem EC, CS and Mechanical students. Mr. Kishan Bhat took a session on electronic sensors used in Mechanical industry, mainly in satellite launching vehicles. Mr. Venugopal explained about different types of satellites and the structure of Nano satellite to the students.



- Two days workshop was organized for the pre-final year students of Electronics & Communication Engineering on 13-10-18 and 14-10-18 on Embedded Electronics & IoT.





- Online certification Course under Spoken Tutorial project developed by IIT Bombay for MHRD, Government of India as an objective to pass on the knowledge of technology and free and open source software (FOSS) through the website to the millions in our country who lack opportunities and access to learn any software. 120 students from 3rd, 5th & 7th semester of EC participated in this course. Out of which 72 students cleared and got the certificate. Arduino course for 3rd semester students on 16-11-2018. Java course for 5th semester students on 19-11-2018. PHP and my SQL course for 7th semester students on 20-11-2018.



- A workshop was conducted on basics of Arduino to II PUC science students of Vivekananda PU College on 03-11-18 in IoT lab.





- A one day Workshop on Arduino programming was organized by Department of Electronics and Communication Engineering in association with Arduino club on 15th of March 2019 at Industry Connect IOT lab for students of Vivekananda P U college and St. Philomena PU College.



- A Technical talk was organized for the students of Electronics and Communication Engineering department on 09-04-2019. The resource person was N. M. Pratap, "Drone man" a young scientist from Mandya.

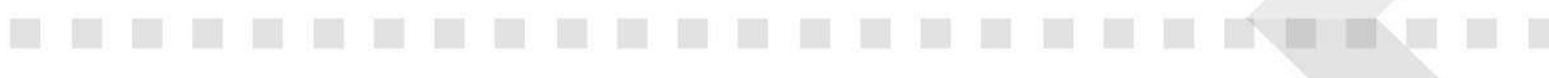




- Alumni talk was organized for the final year students of Electronics & Communication Engineering on 11-08-18. The resource person was Ms. Jesna M, System Engineer, Infosys Mangalore. She gave an insight into typical Campus Recruitment Levels that every Company follows and how students have to prepare and plan to face those levels.



- Alumni talk was organized for the final year students of Electronics & Communication Engineering on 11-08-18. The resource person was Ms. Ahana Rai, HR learning and Training, Seventh Sense Solutions. She spoke about the importance of having a good language and confidence during the interview.





- Alumni talk was organized for the final year students of Electronics & Communication Engineering on 28-08-18. The resource person was Ms. Dhanyatha, System Engineer, Infosys Chennai.



- Alumni talk was organized for final year students of Electronics & Communication Engineering on 14-09-18 by Mr. Pramod Kumar Baliga from Cadence, Bangalore
- Alumni talk was organized for the final year students of Electronics & Communication Engineering on 05-09-18. The resource person was Mrs. Kavyanjali, System Engineer, GE Bangalore.

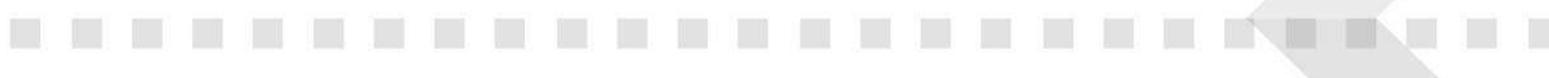




- Alumni talk was organized for the pre final year students of Electronics & Communication Engineering on 15-10-18. The resource person was Mr. Ramesh, Co-founder, SLEKIN technical solution Engineer from Mangalore.



- Alumni talk was organized for the pre-final year students of Electronics & Communication Engineering on 10-11-18. The resource person was Mr. Atul Krishna M, System Engineer, Qualcomm, Singapore.





- Association of Electronics and Communication Engineering organized "Circuit Gallery" a mini-project exhibition competition on 13-05-2019. The competition created a platform for 4th and 6th Semester students to showcase their technical talents.



- Valedictory function of Association of Electronics and Communication Engineering was held on 23-05-2019.





## PAPER PRESENTATION BY FACULTIES

- 1 A paper titled "Strategizing Institute Excellence in Innovation: Best Practices, Innovation and Entrepreneurial Traits at Vivekananda College of Engineering & Technology-Puttur" authored by Dr.Manujesh B J, Prof. Shrikanth Rao S K, Dr. Roshan Joy Martis, Dr. M S Govinde Gowda got selected for XXI ISTE Karnataka State Faculty Convention to be held in BKIT, Bidar.
2. A paper titled "Recent Advances in Brain Signal Analysis: Methods and Applications 2018" authored by Dr. Roshan Joy Martis, Professor, department of EC published in Journal of Computational Intelligence and Neuroscience, Hindawi Publishers, 2018.
3. A paper titled "Recent advances in big data analytics, internet of things and machine learning." authored by Dr. Roshan Joy Martis Professor, department of EC for Future Generation Computer Systems in 2018.
4. A paper titled "Recent Advances in Biomedical Signal Processing Techniques, Biomedical Instrumentation and Bio Sensors Implicating Human Mechanics" authored by Dr. Roshan Joy Martis Professor, department of EC for Journal of Mechanics in Medicine and Biology, World Scientific Publishers,2019.
5. A paper titled "ALMH Technique for the fusion of 2D Multi-resolution Images" presented by Mr. Shivaprasad, Asst. Professor, department of EC on 14th – 15th Dec 2018





## WORKSHOPS ATTENDED BY FACULTIES

1. Ms. Sangeetha B L, Assistant Professor, Department of EC attended 2 day workshop on "Antenna Design and Analysis using Ansys HFSS" was organized by School of ECE, Reva University, Bengaluru on 28th and 29th July 2018.
2. Mrs. Prabha G S, Assistant Professor, Department of EC attended 5 day short term training program on "Algorithm and architectures for high efficient video processing systems" was organized by NITK, Surathkal on 20th and 24th April 2018.
3. Mr. Gurusandesh and Mrs. Nirupama K, Assistant Professor, Department of EC attended 3 day workshop on "Aspects of LTE 4G" under TEQIP 1.3 held from 22nd to 24th March, 2019 at Sahyadri college of Engineering and Technology, Mangaluru.
4. Two day FDP on "Fundamentals of Electromagnetics and Wave Propagation" was organized for the Faculty of Electronics & Communication Engineering from 26-07-2018 and 28-07-2018. The resource person was Dr. U. Sripathi Acharya from NITK, Surathkal. It helped the faculties in enhancing their skills in the area of Fundamentals of Electromagnetics and Wave Propagation.
5. Two day FDP on "IOT" was organized for the Faculty of Electronics & Communication Engineering from 25-04-2019 and 26-04-2019.





## STUDENTS ACHIEVEMENT

1. Mrs. Sriraksha K A Secured 4th rank in M.Tech course Digital Electronics and Communication Systems under VTU, Belgavi.

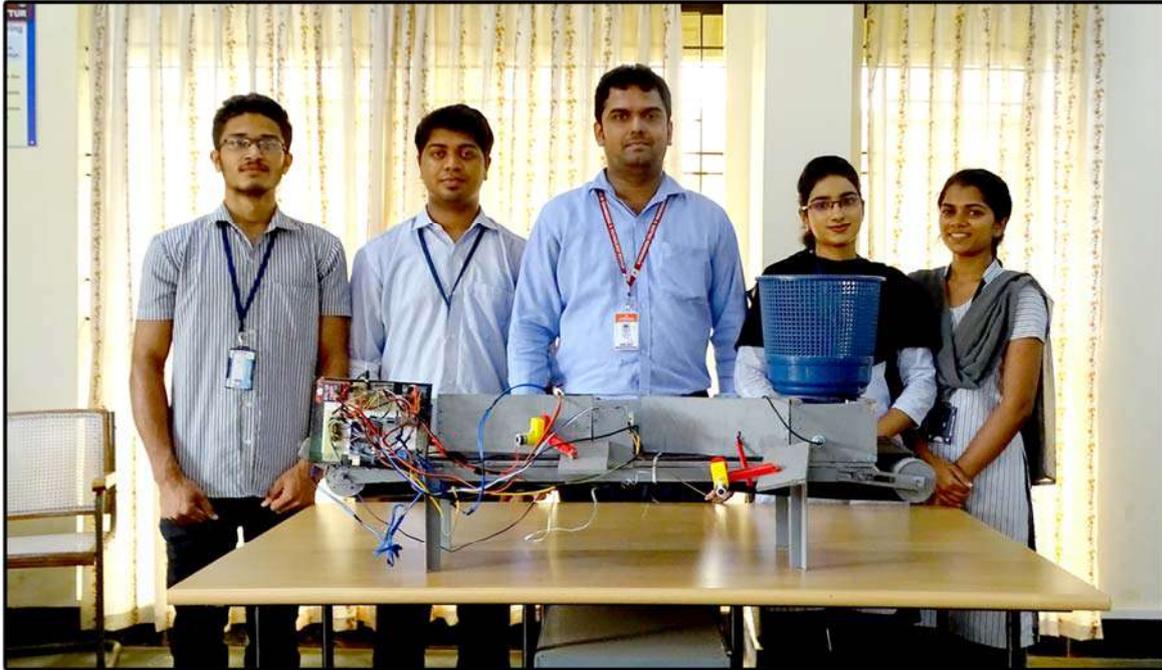


2. The Final year Project titled **“Animatronic hand for physically disabled people”** carried out by students Mr. Akhil P, Mr. Jithesh Jain, Mr. Akshaya and Mr. Pavan Bhat under the guidance of Mrs. Jovita Lasrado got selected under SELCO grants.





3. The final year Project titled “**Automatic Waste Segregation and Monitoring System**” carried out by students Mr. Shashwath N G, Mr. Shylesh Kumar G Y, Ms. Shanitha U M and Ms. Saniya Taj under the guidance of Mr.Gurusandesh got selected under KSCST grants.



4. The final year project “**Electrocardiogram Based Atrial Fibrillation Detection using Principal Component Analysis**” bagged first prize in National level paper presentation “Jnanasangama-2019” held at Vivekananda College of Engineering & Technology Puttur.



5. Pre-final year Students project titled “**Eco friendly cooling system**” got selected for semi-final round of Anveshana.



# STAFF - STUDENT ARTICLES

## WEIGHTED ENCODING TECHNIQUE FOR REMOVAL OF MIXED NOISE IN AN IMAGE

During transmission, digital images are often distorted by noise. In day to day life, we come across many applications based on image processing like digital cameras, traffic monitoring, forensic investigations and many more. But due to improper handling of instruments, poor image sensors of cameras and other natural and environmental phenomenon, images are corrupted with noise. To obtain original transmitted image from degraded image  $d$  the task of image denoising technique, keeping the original details of the image intact. Image denoising deals with removing of such noise along with its detail preservation thus retaining all possible important signal features. Many methods have been proposed, but they are not self adaptive and can remove small amount of noise. In this paper we desire to implement a model which will remove the noise so as to get close to original image.

Noise is unwanted information affecting quality of an image. Noise can be added to the image through various sources like camera defects, poor transmission or acquisition. Usually two types of noise encountered are AWGN and IN noise. AWGN is introduced due to motion in camera sensors. IN noise is introduced through faulty pixel, poor functioning of memory. Thus few pixels are replaced by random noise pixel, leaving remaining pixels unaltered. SPIN and RVIN are also experienced in IN noise. For efficient transmission, noise removal is a major concern. Thus filtering plays an important role for removing noise. Recently various filtering methods have been used with different algorithms. Initially in first step, noise present in the image is detected, and then after filtering methods like mean filter, median filter, bilateral median filter, switching median filter, adaptive median filter, etc. are used. However, this two phase strategy partially fails when AWGN and IN have high density of noise.

Gaussian filtering is one of the typical filtering methods used for smoothening noisy image but in the meantime oversmoothering causes loss of image edges. To overcome this problem, for edge preservation bilateral filtering is used. In this nonlinear filtering method, each pixel is estimated as weighted mean of neighbouring pixel. But these weights are dictated by closeness of spatial and intensity. Median filter is used in many filtering methods, but results in unnatural image due of loss of image features. Many improvements are made in median filters so as to retain the features of original image; one of them is adaptive median filtering. In adaptive media filter, window size increases adaptively until correct median value is obtained. Then this median value id replaced by noisy pixel.

In this model, we present a simple and effective mixed noise removing method. This model doesn't involve pixel detection step, rather each noisy patch is encoded to remove mixed noises simultaneously using pre-learned dictionary. As we observe, the distribution of mixed noise is very complex; with heavy tail and doesn't have any parametric model. The conventional  $l_2$ -norm method suits to remove Gaussian noise distribution, but it is unable to suppress mixed noised whose non-Gaussian distribution is complex. In the presented paper, using weighted encoding residual, the final encoding residual follows Gaussian distribution, thus suppressing mixed noise. Weighted encoding with sparse representation is combined, to minimize the noise to the maximum value and to get higher PSNR.

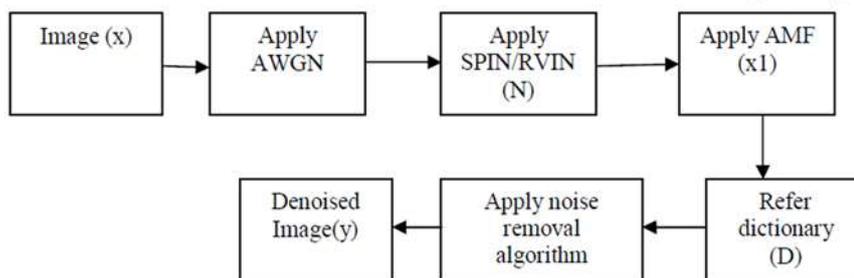


Figure 1: Block diagram for proposed method



The 5 high-quality images as shown in Figure 2, from [15] are used to obtain the dictionaries. K-means clustering is applied to large number patches from the five images are grouped into 200 clusters. PCA technique is applied to the clusters to get the dictionary  $D$ . From above discussions, we observe the for mixed noise removal, AMF is used to reduce SPIN widely. Thus to make a fair comparison, for AWGN+SPIN/RVIN we still use AMF to obtain  $x_1$ . Further algorithm is applied image  $x_1$ , so as to reduce mixed noise and to obtain original image with effective results. In this noise removal algorithm, the mixed noise of image ( $n$ ) is suppressed by weighting the encoding residual. Residuals ( $r$ ) are the values obtained after comparison of denoised image after iteration and image ( $x$ ). For mixed noise, the residual is initialised as,

$$r^{(0)} = n - \mu_i \cdot 1 \quad (1)$$

Where  $\mu_i$  is the selected dictionary for patch  $y_i$  can be calculated as,

$$\mu_i = D_i^T \hat{x}_i \quad (2)$$

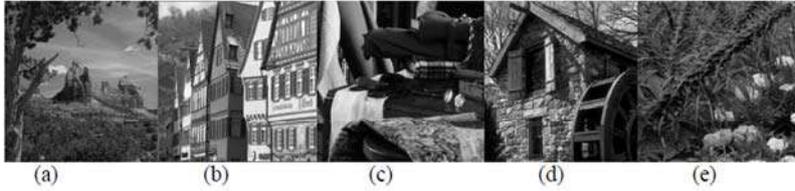
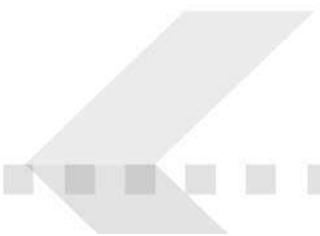


Figure 2: High-quality images

The residuals ( $r$ ) for assigning weights ( $w$ ) can be done in two ways. The residuals obtained from the pixels caused by AWGN are assigned with weights close to 1. The residuals obtained at other pixels corrupted by IN are assigned with smaller weights. Weights ( $w$ ) and coding vector is updated by iterating the value of  $i$ . the weight ( $w$ ) is updated using coding residual ( $r$ ). The weights ( $w$ ) can be initialised as,

$$W_{ii} = \exp(-ar_i^2) \quad (3)$$

Using weighted encoding technique, for removal of mixed noise, the quality of recovered image is improved. The presented method for removal of combination of Gaussian and impulse noise simultaneously gives better performance result both in terms of quantity and quality. Using set of pre-learned dictionary and weights, image patches are encoded to reduce heavy tail of noise distribution. The adaptive nature of weights decides the intensity of noise. Hence, adaptive weighted encoding denoising technique by suppressing the mixed noise with better PSNR is achieved.





# *Maithreyee Gurukulam*

Gurukula is to introduce an experiment on the basis of Rishi culture, system of education which is in practice for more than 25 years in different Gurukulas of Karnataka. Maithreyee Gurukulam started in the year 1994 and Prabodhini in 1995. It is important to have macro and micro studies when a new experiment is introduced into the field.

The team under the aegis of Bhartiya Shikshan Mandal, used to sit for longer discussion, four hours each time, once a month, more than two years. Framing the present system is the cream of all those churning of all those experiments in the British regime experimented by the Great luminaries such as Maharshi Aurobindo in Pondicherry, Swami Vivekananda, MK Gandhi, Ravindranath Tagore, Balagan-gadhara Tilak in Pune and many other freedom fighters who have done experiments in the field of education to bring the transformation in the society.

At the first step conceptualized the Gurukul system of education and looked at Upanishads for authentic sources. King named Ashwapathi from Upanishad narrates the prevailing social condition as devoid of robbers, irreligious, illiterate and anti-social individuals. This is the actual narration of healthy society. The same parameters or the yardsticks to measure may be considered for indicating a healthy society. A society, an institution, an organization, a college, a village and governance; all these systems can be measured on the above said parameters to portray the health of it.

The need of the hour is a healthy society. So, healthy individuals leading to healthy society (Svatha Samaja Samrachana) is main aim and purpose of Gurukulas, considering the primary role of education at different levels: physical, vital, emotional, intellectual and finally spiritual growth. When this domain is identified, "how to materialize the transformation and the manifestation of the divinity existed and established within?" as asked by Swami Vivekananda. Swami Vivekanandaji also opined that Guru Griha Vasa (living with the Guru for guidance) was the main method to gain knowledge, hence the manifestation of divinity. Acharyas and Matrusris will be guiding the young generation in Gurukulas.

The motive behind identifying the above said domains is to develop an integrated personality. Rama Rajaya concept of Mahatma Gandhi is the guiding force. Aesthetic sense and love for nature displayed by Vishvabharati of Rabindranath Tagore is also included. Patriotism and social reformation are guiding idea from Bhagini Nivedita and Balagan-gadhara Tilak. The underlying spirit of all these experiments in the field of education invariably imbibe Bharatiyata (Indian-ness).

After this clarity of conceptual idea made a team to train the young scholars to develop them as Acharya and matrices in Gurukula from 1992 onwards.

Veda and Yoga based culture is the main base for entire Gurukula system. Five areas of study were identified; Veda, Yoga, Vijnana (Science), Krishi (organic agriculture) and Kala Kaushala (fine arts and performing arts). This project is initiated by imparting knowledge with Stri Shakti (women power), because Bharatiya Culture depends upon women power. It was noticed very prominently that Brahmavadini Parampara (lineage of spiritually based women power) alone can establish and empower the healthy society.

Bharat rests upon the Ashrama (stages of a human life) system; Brahmacharya, Grihastha, Vanaprastha and Sannyasa; if education is not imparted in the first stage, if not followed healthy Grihasthashrama, having not practiced spiritually oriented activities in the third stage, for one the life will be not really worthy, rather sometimes becomes anti-social. A well-progressed and completely blossomed personality only can be an integral part of healthy society, making the individuals healthy. This particular concept must be taken for structuring the syllabus for education. Hence Panchamukhi would be most suitable areas such as; Veda, Vijnana, Yoga, Krishi and Kalakaushalam.



Human being is bestowed with extraordinary Panchaprakoshtha (five chambers of human structure) system, namely; Head, Mouth, Heart, Stomach and Lungs, where education has maximum application. Purification at all these levels is intended.

Inbuilt capacities of human being should be cultured and nurtured; Shraddha, Medha, Prajna, Pratibha and Dhriti; inbuilt emotional and intellectual abilities. Shraddha is purest form of emotion; devotion, sense of respect, generosity, compassion and sharing caring etc. Medha and Prajna are for creativity and innovation, brain power of mankind. Man must be intellectually creative, emotionally pure, spiritually rooted (Adhyatma Adhishthita), socially productive (Samaja Upayogi) and culturally patriotic, ultimately bliss suffused learning technique should be adopted every level. This is the core ideology behind framing syllabus in this direction. Ojas, Varchas, Tejas, Bhrajas are the qualities to fill the personality to make individual vibrant.

Experiment, Examination and Evolutions are the processes involved in refining the ideas of an area of knowledge. Competencies to be evolved at different levels of growth of young children and methodology to evaluate;

Five stages of growth in terms of behavioral conduct (Adhishila and Adhicitta) will be taken care in five years from the age of eight. Education actually starts at eight year of a person. Sheela and Chitta are inner personality; mental and behavioral pattern should be cultured and structured and intellectual abilities; Adhicitta - analysis, synthesis, reasoning, calculations etc, for learning language, mathematics should also be focused carefully. Skill oriented programs may be introduced at this level. Parents play major role especially mother, because there is no proper system in the society, Gurukulas are started. It has been a well-experimented design that being successful.

Spoken Samskritam, chanting of Veda Mantras (Vak Yoga - Yoga of speech) may be made compulsory for all round development. In Ahara (food), Vihara (routine), Vyavahara (behavior), Vichara (thought); these areas Yoga component is inbuilt.

Evaluation method; continuous, spontaneous and natural methods would be best against the present system of evaluation. Ghatika (pick and speak), Shalaka (selecting the sentences from the entire text for explanation), Sphurana (flashes of new ideas in different contexts), Vada (debating on a subject) and other suitable methods of evaluations are adopted in the present Gurukulas which can be systematized in a customized conditions. Different Sabhas, Goshtis (symposiums and workshops) would help a lot to examine the progress of a students' progress.

The happiest thing is that after completing their 12 years of education in Gurukulam 5 students are working as mathrushris (Teachers) here only. 2 Students are conducting 'GrihaGurukula' in their home itself. 2 Students had completed their Ph.d courses in their interested shastras. Many students are identified in particular areas like Ayurveda, Jyothishya, Technical and Education fields. 5 students became Vidushis in Music, Bharathanatya etc. Some students are working as Veda and Samskrutha teacher in many schools.

Apart from their career they are conducting Balagokula's, VedaShibira, Samskrutha Conversation Camp, Yoga Camps etc, in many schools and colleges. Moreover all students gained confidence to work in any field at any cost.

Mrs. Nirupama K.

Asst. Professor

Dept. of EC





## 10 COOLEST NEW GADGETS TO LOOK FORWARD TO THIS YEAR



A bunch of new tech debuted at the 2019 Consumer Electronic Show expo.

### 1. Kitchen Aid Cook Processor Connect

Kitchen Aid gave U.S. consumers a new kitchen counter appliance to lust after at CES: the Cook Processor Connect, a do-it-all machine that automatically stirs veggies as they sauté, chops ingredients to your preferred size, kneads dough, steams food, measures weight, and more. It also comes programmed with 100 recipes with step-by-step instructions accessed through an app. It's like an Instant Pot, but pretty.



### 2. Samsung TVs: The Wall and The Frame

Samsung had big TV news at CES 2019. Delving deeper into its work with microLED—a new class of screens with exceptional picture quality and modular capabilities—it revealed a 75-inch microLED TV that's great for the home. It complements the massive 219-inch update of The Wall, the previously 146-inch behemoth that Samsung debuted last year. Samsung also updated The Frame, seen here, to QLED quality for 2019. Samsung beefed up its QLED 8K line to include 65-, 75-, and 82-inch screens.



### 3. Lenovo Smart Clock with Google Assistant

We're no strangers to interactive screens in the home, between Facebook Portals and Amazon Echos and Google Hubs. The beauty of Lenovo's new Smart Clock, then, is its simplicity. It won't video conference or stream TV, but it covers all the other bedside bases: it tells times, charges phones, and gently wakes you up with a clock face that gradually brightens before your alarm goes off. By connecting it to Google Assistant, you can instruct it to do a whole lot more. Small and stylish with its heather gray case, it's an unobtrusive and helpful addition.



### 4. Mophie Juice Pack Access

This is one of the most practical gadgets to come out of CES: a portable charging case for Apple iPhones that doesn't use or cover up the Lightning port. Meaning, you can charge your phone while listening to headphones. Mophie's Juice Pack Access gets its power from any Qi wireless charging pad or its included charging cable, giving you up to 31 hours of battery life. And despite its sleek design, it's strong enough to protect your phone. It fits Xs Max, Xs/X, and XR iPhones.



### 5. Nreal Light Mixed Reality Glasses

Mixed reality glasses can be used to take what you're seeing of the real world and overlay it with virtual content. At CES 2019, Nreal, a Chinese start-up, showed off a pair that almost looks like normal glasses you could wear on the street. Nreal's ready-to-wear Light glasses are designed to give wearers an immersive experience with spatial sound, voice control, and a widescreen display at 1080p—without the bulky headset.





### 6. Harley-Davidson LiveWire Motorcycle

Harley-Davidson made waves last year when it previewed its all-electric motorcycle, called the LiveWire. The LiveWire targets a new demographic of motorcycle riders, one that appreciates a quiet machine for urban street riding that runs clean. It isn't manual either, meaning no clutch or gear-shifting to accelerate. This is the first in a new generation of bikes.



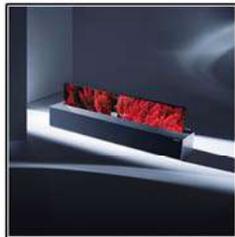
### 7. MoodoGo Portable Diffuser

Moodo makes aroma diffusers for the home that can be personalized thanks to four interchangeable scent capsules and smart technology. Now, Moodo has introduced the MoodoGo device, which is easy to cart around; all you need is a USB power supply for it to start dispensing good smells. The MoodoGo only holds one scent capsule, but it's a perfect fit for car cupholders and cramped desk spaces.



### 8. Withings Move Activity Tracking Watch

Withings Move, the new smartwatch from Withings, monitors your activity and your sleep. It has a GPS tracker and syncs with the Health Mate app. It only costs \$69.95. Most impressively, it works for 18 months without requiring a battery charge. That, and its understated design with the analog clock face is more timeless than a lot of trackers on the market.



### 9. LG Signature OLED TV R9

This television isn't tiny; it's just rolled up. LG showed off its new, disappearing OLED TV, with a screen that can stretch to 65 inches and then roll into a compact box, at CES, setting a launch date for the second half of 2019. You'll get a 4K HDR Smart TV-watching experience like none before it, with Google Assistant and Alexa. That, plus a decluttered view.



### 10. Gillette Heated Razor

Gillette's innovation branch debuted this heated razor for an Indiegogo campaign last year, and it was wildly popular – probably because a razor that mimics the barbershop treatment without tacking on more blades sounds pretty nice. In less than a second, the razor heats up to 122 degrees, warming soap and skin for an upgraded shave.





# BRAIN TASK CLASSIFICATION

**Abstract**— In the study of brain task classification, an effective method is proposed in this paper for the feature extraction of EEG (Electroencephalogram). It is based on the wavelet packet decomposition (WPD). For a given EEG data wavelet packet coefficients are directly obtained using wavelet packet decomposition method. The energy of the different bands, mean, standard deviation and highest magnitude of the coefficients of wavelet packet decomposition of different EEG sub bands are selected as features for the feature extraction. All features will be given to the classifier. In this proposed method KNN classifier is used for EEG signal classification. The performance is evaluated by WPD and KNN using Bonn university EEG dataset.

**Keywords:** k-nearest neighbors algorithm (KNN); Wavelet packet decomposition (WPD); Electroencephalogram (EEG)

## I. INTRODUCTION

Brain is very complex part of our body. It consists of approximately 100 billion nerve cells. These cells are called as neurons. Signals are generated by the neurons in different parts of brain when they are excited. Physiological control process and external stimuli helps in passing signal to other parts of body. Hence EEG signals provide rich information about electrical activity of brain. Nowadays for clinical and research purpose EEG signals are mostly used to detect activity of the various action within the brain. EEG signal generates large amount of data which is difficult to analyze by observation. They are having low amplitude because of skull's composition. Computers help in recognition of abnormalities in brain from EEG signal. EEG signal occurs in frequency range of delta (0-4Hz), theta (4-8Hz), alpha (8-12Hz) and beta (>12Hz) [2]. To record electrical signals, electrodes are placed on the surface of scalp using 10-20 electrode placement system.

EEG represents a combination of the multifarious activities of many small zones of the cortical surface beneath each electrode. The signal changes its characteristics in relation to mental tasks, external stimuli, and physiological processes. There are a few non-invasive methods for obtaining these brain signals. The common methods could be grouped into 3 types. The first type uses EEG signals recorded at the scalp during some mental tasks. The second uses single-trial visual evoked potential (VEP) signals where the subjects gaze at a screen of alphabets or menus. The third uses synchronization and de-synchronization of  $\mu$ -rhythm extracted during sensory motor tasks. That EEG signal processing plays a major role in analysis of disease. Signal processing of EEG is fundamental for analysis of brain activity and diagnosis of normality or abnormality of signal that is important for analysis of any disease.

Electroencephalogram (EEG) has gained much attention from the researchers for the study of brain-computer interface (BCI). EEG-based BCI systems employ electrical activity of brain to classify different EEG signals. One way to classify the signals effectively is to acquire discriminative features from that signal. Over the past years a variety of evidences have evaluated the possibility to recognize a few mental tasks from EEG signals. However, how to improve the recognition performance of EEG signals in signal processing is still a key problem. The recognition procedure mainly includes the feature extraction and the classification, in which the feature extraction plays an important role for the classification. This project mainly focuses on feature extraction.

At present, feature extraction methods for the EEG signal mainly include the following methods: (1) Fast Fourier transform (FFT), (2) Autoregressive (AR) model, (3) Time-frequency (TF) analysis and (4) Utilizing coefficients of wavelet transform. Due to the non-stationary property of EEG signals, traditional analysis methods such as Fast Fourier Transform are not suitable for this work.



This paper discusses a feature extraction method based on wavelet packet decomposition. This approach accorded with the results that the energies of EEG frequency range are different during subjective having different task at the same time. The energy of different bands, mean, standard deviation and highest magnitude of coefficients of wavelet packet decomposition are selected as features. The performance has been done by using Bonn university EEG dataset.

## II. PROPOSED METHOD

Brain task classification using EEG signal is considered in this proposal. Features such as energy of each different bands, mean, standard deviation and highest magnitude of coefficients are calculated using Wavelet packet decomposition method (WPD). It is the extended form of the wavelet decomposition (WD). It is the efficient method to extract the features of EEG. After the feature extraction, all features are given to the classifier. Here KNN classification algorithm is used.

## III. METHODOLOGY

Brain task classification utilizing EEG signal consists of three major steps. They are preprocessing, feature extraction and classification. The block diagram of the EEG classification is shown in Figure 1.

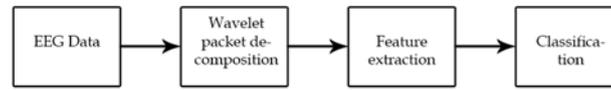


Figure 1: The block diagram of the EEG classification

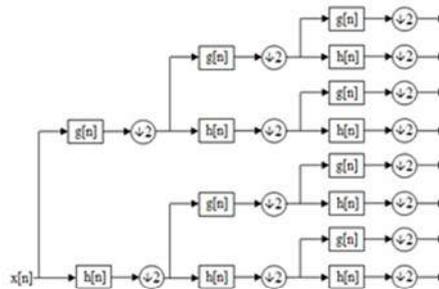
### A. Preprocessing

In EEG signal analysis, depending on the nature of practical applications, different well-defined narrow frequency bands, namely delta ( $\backslash 4$  Hz), theta (4–8 Hz), alpha (8–12 Hz), beta (12–30 Hz), and gamma (30–40 Hz) are widely investigated for feature extraction.

Bonn university data is used for the study of brain task classification. The recording was done using standard 10-20 electrode placement system. The complete data sets consisting five sets each containing 100 samples which is named from A to E. Set A and B consists of EEG segments taken from surface EEG recording carried out on five healthy volunteers. Volunteers were relaxed in an awoken state with eyes open (A) and eyes close (B), respectively. Set C, D and E were taken from EEG archive of presurgical diagnosis. Segments in set D recorded from the epileptogenic zone. Set C is recorded from hippocampal formation of opposite hemisphere of brain. Sets C and D contains only activity measured during seizure-free intervals. Set E contains only seizure activity. In This proposal sets B, D and E are used.

### B. Wavelet packet decomposition

Wavelet packet decomposition (WPD) (sometimes known as just wavelet packets) is a wavelet transform where the signal is passed through more filters. Wavelet packets are the particular linear combination of wavelets. They form bases which retain many of the orthogonal, smoothness, and localization properties of their parent wavelets. The coefficients in the linear combinations are computed by a recursive algorithm making each newly computed wavelet packet coefficient sequence the root of its own analysis tree





#### 1) Energy of sub-bands

From an energy point of view, WPD decomposes signal energy on different time-frequency plain, and the integration of square amplitude of WPD is proportional to signal power.

#### 2) Mean

For an EEG, the arithmetic mean, also called the mathematical expectation or average, is the central value of a discrete set of WPD coefficients. i.e sum of the values divided by the number of values.

#### 3) Highest magnitude of WPD coefficients

EEG signals are decomposed using WPD method. The highest magnitude of coefficients is the largest value over the entire set of coefficients.

#### 4) Standard deviation

Standard deviation is the measure that is used to quantify the amount of variation or dispersion of a set of values. In EEG dataset there are 3 different classes, each class consists of 100 samples.

#### D. Classification

The extracted features are fed in to a classifier in order to calculate the classification accuracy. In this proposal KNN classifier is used.

#### k-fold cross validation

In this study 3-fold cross validation was used for training and testing sets and during classification. In this method the entire dataset was divided into 3 non-overlapping subsets such that almost equal number of data from each class belongs to each fold. In one fold of classification one of the 3 folds used for testing and rest 2 subsets were together used for training the classifier. The process was repeated for 3 times so that each of the subsets will be chosen for testing. The accuracy of the 3 different folds were calculated for the evaluation of the performance.

#### IV. RESULTS

The proposed methodology on the 3 classes of EEG data is implemented in MATLAB. The EEG signal is decomposed into different frequency bands. The wavelet packet decomposition is performed on each band. Then the calculated features are fed into the classifier and accuracy is calculated.

| Classifier | Class1 accuracy | Class2 accuracy | Class3 accuracy | Overall accuracy |
|------------|-----------------|-----------------|-----------------|------------------|
| KNN        | 95              | 96              | 94              | 95               |

#### V. DISCUSSION

The proposed methodology is applied on EEG data belonging from 3 different classes. The 3 classes are normal, ictal and inter-ictal. The data is obtained from Bon University. Wavelet packet decomposition method is applied on EEG data which gives different sub ends of EEG data and the features are extracted using this method. Extracted features are fed to the KNN classifier.

The prototype is developed in MATLAB. We believed that the prototype model proposed in this study will be helped for further study and primary care physician, because it offers an automated method for classification of EEG signals. Classification is done with the 95% accuracy

#### VI. CONCLUSION

EEG signal can be effectively used to study the mental states and ailments related to the brain. The EEG signals are non-linear in nature and its vision interpretations are tedious. Our main focus is on extracting the different frequency bands of EEG signals and classification of those signals. An automated system is generated to extract the different frequency bands of EEG signal. For each frequency band features are extracted using wavelet packet decomposition method which is more effective than other methods. For classification KNN classifier is used and an accuracy of 95% is achieved. In this method accuracy is improved.

Ms SUPRITHA H. D.  
MS. RASHMI R.  
MS. PRITHVSHAILA.  
MS. ANUSHA J.  
4<sup>th</sup> Year EC



## WEARABLE SOLAR CELLS POWER ELECTRONICS

One day you may be able to recharge your phone by plugging it into your clothes....!!!

A Drained Smartphone battery often sends us hunting for the nearest outlet, if there even are any. But within a decade, we might be wearing the outlet.

In world of fabrics infused with the power of the sun, recharging could be as simple as plugging devices into our clothes. Helping this potential future along, chemist John Badding and his colleagues at Pennsylvania state university recently embedded solar cells within flexible wires that can be woven into fabric.

It is just like a common, rigid kind, but with a fiber-optic housing that enables it to bend into a loop

- Light particles pass through the outer layer, freeing a cascade of  $e^-$  through the material
- The movement of free  $e^-$  and the gaps created by those loosed particles generate an electric current.
- Electrodes to transfer the power are attached to the solar cell.

The flexible wires assume the same basic arrangement as a common type of rooftop solar cell, which contains a negatively charged layer, a positively charged layer, and a neutral material sandwiched between them, when photons from the sun smash into the outer layer of the rooftop cell, they initiate the photovoltaic effect - a cascade of reaction across the charged layers, ultimately generating usable power.

Badding and his group devised a new way of creating that semiconducting sandwich by starting with a flexible, hollow fiber-optic thread; inner and outer walls of the thread correspond to the positive and negative layers of the common solar cell.

One of the first parties to get in line for such a versatile and powerful material would be the U.S military, to weave into soldier's uniform and tents.





## SOLDIER

Yeah I am a Soldier  
The day and night  
In rain and cold  
Without counting the wounds  
I served the country

The things I have done  
Cannot be described by anyone  
My life is carved in stone  
I protect the country  
Yeah I am a Soldier

My name is etched  
In the book of sorrow  
In the book of death  
I bear any burden for the country  
Yeah I am a Soldier





## *OLED TECHNOLOGY*

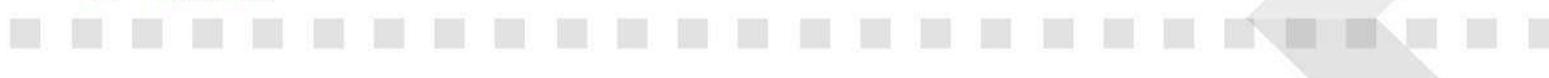
OLED stands for “Organic Light - Emitting diode” and is a relatively new technology part of recent innovations in display monitors, lighting and more. OLED technology as the name suggests is a next-generation advancement upon regular LED or light-emitting diode technology, and LCD or liquid crystal display technology.

The closely related LED displays were first introduced to the consumer in 2009. OLED displays were introduced commercially a year later and will allow for even thinner and brighter displays with OLED technology. Screens that are completely flexible and can fold or roll up are possible

In 2009, Philips became the first company to manufacture an OLED lighting panel called Lumiblade. Philips describes the potential of lumiblade as “... thin and flat, and the little heat dissipation, lumiblade can be embedded into most materials with ease... gives designers almost limitless scope to mold and meld. Lumiblade into everyday objects, scenes and surfaces, from chairs and clothing to walls, windows and tabletops”.

According to Philips, OLEDs works by passing electricity through one or more incredibly thin layers of organic semiconductors. These layers are sandwiched between two electrodes one positively charged and one negatively. The “sandwich” is placed on a sheet of glass or other transparent material which in technical terms, is called a “substrate”. When current is applied to the electrodes, they emit positive and negatively charged holes and electrons. These combine in the middle layer of the sandwich and create a brief, high - energy state called “excitation”.

As this layer returns to its original, stable, “non-excited” state, the energy flows evenly through the organic film, causing it to emit light.





## **LIEUTENANT BHAVANA KASTURI – 1ST WOMEN TO LEAD MALE CONTINGENT AT THE 71ST ARMY DAY PARADE**

2019 is off to a refreshing star. While India became the first Asia team to win a test series in Australia, now we have the first lady officer who will lead a contingent on the army day parade on Jan 15.

Lieutenant Bhavana Kasturi will lead a Contingent of 144 male personal, first time in the history of Indian Army. Though, in 2015 lady officers from tri services had led a squad ion with 148 personal each on the republic day, no women officer prior to Lt.Bhavana had led the Army day parade.

On the 71st Army day, she will lead the Indian Army's service Corps (ASC) Contingent. This parade is all the more Significant because the ASC is taking part after a gap of two decades.

"Our center is in Bangalore and I am coming from our regimental center and its been six months we are practicing along with me, there are two male officers from the center are practicing as contingent commanders", Kasturi said while speaking to the daily pioneer.

She appreciated the army for this opportunity adding that it was symbolic of the evolution and change that is taking place in the entire organization. That is acceptance of more and more women officers.

India today reported that apart from a lady officer leading the ASC contingent, the Army day parade along with the republic day parade will also see, for the first time, display of M777 A2 ultra light Howit-ze and Ka vajra-T artillery.



Ms. AKHILA M  
2<sup>nd</sup> Year EC



## A CHARITY YOU SHOULD KNOW ABOUT

Salumarada thimmakka also known as Aalada Marada timmakka (ವೃಕ್ಷಮಾತೆ) Is an Indian environmentalist from the state of Karnataka. She is noted for her work in planting and tending to 385 banyan trees along a four - Kilometer stretch of highway between Hulikal and Kudur. She has planted nearly 8000 other trees. Her story is that of grit and determination. She received no formal education and worked as a casual Laborer in a nearby quarry. Her work has been honored with the National citizen's Award of India. Her work was recognized by the Government of India and she was conferred with padmashri in 2019.

A.U.S environmental organization based in LOS Angeles and Oakland, California called Thimmakka's Resources for environmental Education is named after her.

Salumarada thimmakka from Karnataka on 16th March blessed the President as she received her Padma Shri award. The award ceremony, which was attended by Prime Minister Modi, Home Minister Rajnath Singh and other notable dignitaries, followed the usual rigorous protocol.

However, when President Handed the award to her, who is more than three decades older to him, and asked her to face the camera, She put her palm over the President's forehead as a gesture of blessing which prompted rapturous applause from the audience at the hall. This simplicity, kindness and greatness of hers make a charity itself. Not only striving to achieve economic progress is our responsibility, inculcating good things within us, safeguarding the environment is thus a remarkable job.





# ARTIFICIAL INTELLIGENCE

Artificial intelligence is intelligence demonstrated by machines, in contrast to natural intelligence displayed by humans and other animals. Computer science defines AI research as the study of “intelligent agents any device that perceives its environment and takes action that maximize its chance of successfully achieving its goals. The term artificial intelligence is used to describe machines that mimic cognitive functions that humans associate with other human minds, such as learning and problem solving.

Modern machine capabilities generally classified as AI include successfully understanding human speech, competing at the highest level in strategic game systems, autonomously operating cars and intelligent routing in content delivery networks and military simulation.

AI can be classified into 3 types i.e., analytical, human inspired and humanized artificial intelligence. Analytical AI has only characteristics consistent with cognitive intelligence; generating a cognitive representation of the world and using learning based on past experience to inform future decisions. Human – inspired AI has elements from cognitive and emotional intelligence; understanding human emotions, in addition to cognitive elements and considering them in their decision making. Humanized AI shows characteristics of all types of competencies and able to be self- conscious and is self - aware in interactions with others.

AI is breaking into the healthcare industry by assisting doctors. According to Bloomberg technology, Microsoft has developed AI to help doctors and to find the right treatments of cancer.

The application of AI in cyber security will ensure in curbing hackers. The incidence of cyber crime is an issue that has been escalating through the years. AI can bring a remarkable change to this novel AI techniques like recurrent neural networks can detect prudery in initial stages itself. This fraud detection system will be able to scan thousands of transactions instantly and predict/ classify them. Face recognition feature can go beyond physical structure to emotional analysis for example, it is possible to detect whether a person in stressed or angry.





## JIO AMBANI AND BUSINESS



My daughter Ishita came & said “Internet in our house sucks”, that gave one piece of idea for jio.

-Mukesh Ambani

These are the words by Ambani. Whole India wonders when jio comes to such a cheap rate and most of the business experts told Amabani will lose the money. But today jio is 9th largest telecom Industry in the world.

HOW JIO IS DIFFERENT FROM OTHER OPERATORS?.

Other operators transmit voices over 2G, 3G & 4G.Jio uses technology called VOLT & where voice is transmitted as data packets over the 4G network.

Jio is the only IP (Internet Protocol) based system. Where even the voice calls are sent through internet packets, even SMS compared to other networks voice calls uses specified channel. Hence it charges only for data

LIFE BEFORE AND AFTER JIO:

|                | Before jio                                       | After jio  |
|----------------|--|--|
| 1GB data       | Rs.198 (approximately)                           | Rs.5.32  |
| Voice call     | Rs. 1(per minute)                                | Unlimited 28days at Rs.149                       |
| YoutubeViews   | Bollywood songs view on youtube around 20M views | Bollywood songs view on youtube around 50Mviews  |
| Pubic Video    | PUBG PCs streamer will get 250views              | A PUBG Emulator player on PC will get 250K views |
| Data Consuming | Not consuming much data                          | India Become top data consumer in the world      |





## AMBANI'S SUCCESS MANTRAS:-

### 1. Dream Big

In 1990's he dreamt of only becoming the largest telecom network always business men think about the future trending technology. Other examples for this case is flipkart, Amazon.

### 2. Do More Say Less

A 57 year old (Mukesh Ambani) lives to keep a low profile on social media. Still he is one of the most talked personalities his focus has always been his business.

### 3. Depend On No One

A feudal style of management is not the mantra today. Ambani realized it even before feudalism was not out of the system.

### 4. Don't Panic Stay Strong

He lost his uncle & his father's business partner and 5months later also lost his father than he took his father's place & steered the company forward

### 5. Keep Your Eyes Open

His eyes will open when it comes to hunting for new ventures. Now he turned on startups that spawn billion dollars in the country.

The world has moved to the power of ideas. There were times only when governments could do and change things for the people then it moved to large co operations. Today five people in a new startups cannot only change a country but the entire world. So do a start up and become owner of your own business.

Mr. ADITYA HEGDE

3<sup>rd</sup> Year EC





## ಸಮಯ ನಿರ್ವಹಣೆ ಮತ್ತು ಯೋಜನೆ

ಜೀವನವನ್ನು ಸಾರ್ಥಕವಾಗಿ, ಸಂಘಟಿತವಾಗಿ ಮತ್ತು ಫಲಪ್ರದವಾಗಿ ನಡೆಸುತ್ತಾ ಉನ್ನತವಾದ ಸಾಧನೆಯನ್ನು ಮಾಡಬೇಕೆಂದು ಬಯಸುವವರಿಗೆ ನಿರ್ದಿಷ್ಟ ಕಾರ್ಯಯೋಜನೆ ಮತ್ತು ಸಮಯ ನಿರ್ವಹಣೆ ಅತೀ ಅಗತ್ಯ. ದಿನಕ್ಕೆ ೨೪ ಗಂಟೆಗಳು ಮಾತ್ರ ಎಂದು ತೀರ್ಮಾನವಾಗಿರುವ ಕಾಲದ ಗಡಿಯೊಳಗೆ ತನ್ನ ಕಾರ್ಯಸಾಧನೆಯನ್ನು ಮಾಡಲು ಸಮಯ ನಿರ್ವಹಣೆ ಅತೀ ಅಗತ್ಯ. ಯಶಸ್ಸನ್ನು ತಮ್ಮದಾಗಿಸಿ ಕೊಂಡಿರುವ ಎಲ್ಲಾ ಗಣ್ಯರ ಜೀವನ ಕ್ರಮವನ್ನು ಗಮನಿಸಿದಾಗ ಅವರ ಎಚ್ಚರಿಕೆಯ ಯೋಜನೆ ಮತ್ತು ಸಮರ್ಥವಾದ ಸಮಯ ನಿರ್ವಹಣೆಯನ್ನು ಗಮನಿಸಬಹುದು.

ಎಲ್ಲಕ್ಕಿಂತ ಮೊದಲು ನಮ್ಮ ಜೀವನದ ಗುರಿಗಳನ್ನು ನಿರ್ಧರಿಸಬೇಕು. ನಂತರ ಯಾವುದಕ್ಕೆ ಮೊದಲ ಪ್ರಾಶಸ್ತ್ಯ ಎನ್ನುವುದನ್ನು ತೀರ್ಮಾನಿಸಬೇಕು. ಆ ಪ್ರಾಮುಖ್ಯತೆಯ ತಳಹದಿಯ ಮೇಲೆ ಆಧ್ಯತೆಯ ಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಿ ಅದಕ್ಕೆ ಪೂರಕವಾದ ಕಾರ್ಯಯೋಜನೆಯನ್ನು ತಯಾರಿಸಬೇಕು. ಇಲ್ಲಿ ಕಾರ್ಯಯೋಜನೆ ಎಂದರೆ ಕೆಲಸ ಮಾಡುವ ಮೊದಲಯವ ಕೆಲಸವನ್ನು ಯಾವಾಗ ಹೇಗೆ ಮಾಡಬೇಕು ಎಂಬ ವಿವರಗಳನ್ನು ಆಳವಾಗಿ ಆಲೋಚಿಸಿ ತಯಾರಿಸಿದ ನೀಲನಕ್ಷೆ.

ಉದಾಹರಣೆಗೆ ಒಳ್ಳೆಯ ಉದ್ಯೋಗವನ್ನು ಪಡೆಯುವುದು ಜೀವನದ ಪ್ರಮುಖ ಗುರಿ ಎಂದು ನಿರ್ಧರಿಸುವುದಾದರೆ ಇದು ದೀರ್ಘಕಾಲದ ಪ್ರಯತ್ನವನ್ನು ಅಪೇಕ್ಷಿಸುವ ಗುರಿ. ಇದಕ್ಕೆ ಪೂರಕವಾದ ಸಣ್ಣ ಧೈಯವೆಂದರೆ ಪರೀಕ್ಷೆಗಳಲ್ಲಿ ಉತ್ತಮ ಅಂಕಗಳನ್ನು ಗಳಿಸುವುದು. ಇದಕ್ಕೆ ಬೇಕಾಗುವುದು ಅಧ್ಯಯನ. ಈ ಅಧ್ಯಯನಕ್ಕೆ ಪ್ರತಿದಿನ ಎಷ್ಟು ಸಮಯವನ್ನು ಮುಡಿಪಿಡಬೇಕು? ಅಧ್ಯಯನವನ್ನು ಹೇಗೆ ನಡೆಸಬೇಕು? ಯಾವ ವಿಷಯದ ಬಗ್ಗೆ ಮಾಹಿತಿಯನ್ನು ಸಂಗ್ರಹಿಸಬೇಕು? ಅದಕ್ಕಾಗಿ ಯಾವ ಗ್ರಂಥಗಳನ್ನು ಅಭ್ಯಸಿಸಬೇಕು? ಯಾವ ವಿಷಯಗಳನ್ನು ನೋಟ್ ಮಾಡಿಟ್ಟು ಕೊಳ್ಳಬೇಕು? ವಿಷಯದ ಕೂಲಂಕುಶ ಮನನಕ್ಕಾಗಿ ಪಠ್ಯಪುಸ್ತಕದಲ್ಲಿಲ್ಲದ ಯಾವ ವಿಷಯವನ್ನು ಅಭ್ಯಸಿಸಬೇಕು? ಯಾವ ವಿಷಯವನ್ನು ಉಪನ್ಯಾಸರೊಂದಿಗೆ ಚರ್ಚಿಸಬೇಕು? ಪರೀಕ್ಷೆಗಾಗಿ ಎಷ್ಟು ವರ್ಷದ ಹಳೆಯ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಗಳನ್ನು ಗಮನಿಸಬೇಕು? ಪರೀಕ್ಷೆಯ ಮುನ್ನ ಒಂದು ವಿಷಯವನ್ನು ಎಷ್ಟು ಬಾರಿ ಪುನರಾವರ್ತಿಸಬೇಕು? ಈ ಎಲ್ಲಾ ವಿವರಗಳು ಕೂಡಾ ಯೋಜನೆಯಲ್ಲಿ ಅಡಕವಾಗಿರಬೇಕು.

ಯೋಜನೆ ತಯಾರಿಸಿದೊಡನೆ ಅದಕ್ಕೆ ತಕ್ಕುದಾದ ವೇಳಾ ಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಬೇಕು. ಈ ಸಮಯ ಪಟ್ಟಿಯಲ್ಲಿ ಜೀವನದ ಪ್ರತಿಯೊಂದು ಅಂಶಕ್ಕೂ ಸಮಯ ನಿಗದಿಯಾಗಿರಬೇಕು. ಆಧ್ಯಯನಕ್ಕೆ, ವ್ಯಾಯಾಮಕ್ಕೆ, ಮನೆಕೆಲಸಕ್ಕೆ, ಪ್ರಾರ್ಥನೆಗೆ, ಮನರಂಜನೆಗೆ ಹೀಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ತಕ್ಕಷ್ಟು ಸಮಯವನ್ನು ಮೀಸಲಿರಿಸಬೇಕು. ಒಂದಂತೂ ಸತ್ಯ ವೇಳಾಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಿದ ಬಳಿಕ ಅದರಂತೆ ಕೆಲಸ ಮಾಡುವುದು ಮುಖ್ಯ. ಸಮಯ ನಿರ್ವಹಣೆಗೆ ದೃಢವಾದ ಮನಸ್ಸು ಮತ್ತು ಅಚಲವಾದ ಬದ್ಧತೆ ಬೇಕು.

ನನಗೆ ಸಮಯವೇ ಇಲ್ಲ ಅದನ್ನು ಮಾಡುವುದಕ್ಕೆ ಇನ್ನಷ್ಟು ಸಮಯವಿದ್ದಿದ್ದರೆ ಎಂದು ಎಲ್ಲರೂ ಗೋಳಾಡುವುದು ಸಾಮಾನ್ಯ. ಆದರೆ ಸಾಧಕರ ಚರಿತ್ರೆಯನ್ನೊಮ್ಮೆ ಗಮನಿಸಿದರೆ ಅದೇ ೨೪ ಗಂಟೆಯನ್ನು ಬಳಸಿ ಚರಿತ್ರಾರ್ಹ ಸಾಧನೆಯನ್ನೇ ಮಾಡಿರುತ್ತಾರೆ. ನಮಗೆ ದೊರೆತಷ್ಟೇ ಸಮಯ ಅವರಿಗೂ ಸಿಕ್ಕಿದೆ. ಆದರೆ ಅವರ ಯಶಸ್ಸಿನ ಗುಟ್ಟು ಸಮಯದ ನಿರ್ವಹಣೆ.

ನಾವು ಮಾಡುವ ಕೆಲಸವನ್ನು ಮನಸ್ಸಿಟ್ಟು ಏಕಾಗ್ರಚಿತ್ತದಿಂದ ಮಾಡಿದಾಗ ಅದು ಒಳ್ಳೆಯ ಗುಣಮಟ್ಟವನ್ನು ಹೊಂದಿರುತ್ತದೆ ಮತ್ತು ಸಮಯದ ಉಳಿತಾಯವೂ ಆಗುತ್ತದೆ. ಇಂದಿನ ಜೀವನ ಅತ್ಯಂತ ಗಡಿಬಡಿಯ ಜೀವನ. ಈ ತುರಾತುರಿಯಲ್ಲಿ ಅನೇಕ ಗುರಿಗಳನ್ನು ಸಾಧಿಸ ಬೇಕಾದ್ದರಿಂದ ಮಲ್ಟಿ ಟಾಸ್ಕಿಂಗ್ ಪರಿಕಲ್ಪನೆ ಹುಟ್ಟಿಕೊಂಡಿದೆ. ಮಲ್ಟಿ ಟಾಸ್ಕಿಂಗ್ ಎಂದರೆ ಹಲವಾರು ಕೆಲಸಗಳನ್ನು ಏಕಕಾಲದಲ್ಲಿ ನಿರ್ವಹಿಸುವುದು ಎಂದರ್ಥ. ಮಲ್ಟಿ ಟಾಸ್ಕಿಂಗ್‌ನಲ್ಲಿ ನಿರತರಾಗಿರುವವರು ತನ್ನನ್ನು ತಾನು ಇತರರಿಗಿಂತ ಹೆಚ್ಚು ಧಕ್ಷರು, ಕ್ರಿಯಾಶೀಲರು ಎಂದು ಭಾವಿಸಿರಬಹುದು. ಆದರೆ ಹಲವು ಕೆಲಸಗಳನ್ನು ಒಟ್ಟೊಟ್ಟಿಗೆ ಮಾಡುವುದರಿಂದ ಕೆಲಸದ ಉತ್ಕೃಷ್ಟತೆ ತನ್ನಿಂದ ತಾನೇ ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಅಧ್ಯಯನದ ಸಮಯದಲ್ಲಿ ಹಾಳುಹರಟೆ, ಮೊಬೈಲ್, ಟಿವಿಯಿಂದ ದೂರವಿದ್ದರೆ ಮಾತ್ರ ಬುದ್ಧಿ ಮತ್ತು ಕಲ್ಪನಾ ಶಕ್ತಿಯನ್ನು ಪ್ರಚೋದಿಸಬಹುದು.

ಸಮಯ ಪ್ರತಿಯೊಬ್ಬ ಮನುಷ್ಯನಿಗೂ ಸಮಾನವಾಗಿ ನೀಡಲ್ಪಟ್ಟಿರುವ ಉಡುಗೊರೆ. ಇದು ಹಣಕ್ಕಿಂತಲೂ ಬೆಲೆಬಾಳುವಂತದ್ದು. ಏಕೆಂದರೆ ಹಣವನ್ನು ಕಳೆದುಕೊಂಡರೆ ಮರಳಿ ಸಂಪಾದಿಸಬಹುದು ಆದರೆ ಕಳೆದು ಹೋದ ಸಮಯವನ್ನು ಏನು ಮಾಡಿದರೂ ಮರಳಿ ಪಡೆಯಲಾಗದು. ಸಮಯ ನಿರ್ವಹಣೆ ಎಂದರೆ ಜೀವನ ನಿರ್ವಹಣೆಯೇ. ಸಮಯವನ್ನು ಪ್ರಾಮಾಣಿಕವಾಗಿ ಚಾತುರ್ಯದಿಂದ ನಿರ್ವಹಿಸುವವನು ಎತ್ತರಕ್ಕೆರುತ್ತಾನೆ. ಸಮಯವನ್ನು ಅಲಕ್ಷ್ಯದಿಂದ ವ್ಯಯಿಸುವವನು ಪರಿತಪಿಸುತ್ತಾನೆ.



## ಎರಡನೇ ಮನೆ

“ಎದ್ದೇಳೋ ಬೆಳಗಾಯಿತು ಇವತ್ತು ಸೋಮವಾರ ಬೇಗ ಏಳೋ” ಎಂದು ತಮ್ಮ ಮುದ್ದಿನ ಕಂದಮ್ಮಗಳ ಶಾಲೆ ಎನ್ನುವ ಮತ್ತೊಂದು ಮನೆಗೆ ಕಳುಹಿಸಲು ಅಮ್ಮಂದಿರು ಹಾತೊರೆಯುತ್ತಾರೆ. “ಶಾಲೆ” ಈ ಪದದಲ್ಲೇ ಏನೋ ಖುಷಿ.

ಪೋಲಿ ಆಟಗಳು, ಕಿತಾಪತಿಯ ದಿನಗಳು, ಪ್ರೀತಿಯ ಸವಿಗನಸುಗಳು ನನಸಾಗದ ಪ್ರೇಮ ಕಾವ್ಯಗಳು ಎಲ್ಲದರ ಸಮ್ಮಿಲನ ಪಾಠಶಾಲೆಯ ಮುಖ್ಯ ಸ್ತಂಭಗಳು ಎಂದರೆ ಅವರೇ ನಮ್ಮ ಗುರುಗಳು. ಮೊದಲ ದಿನವೇ “ಓ ಮೇಷ್ಟ್ರು ಭಯಂಕರ ಜೋರು” ಎಂಬ ಮಾತು ಸರಳ ಪ್ರತೀ ದಿನವು ಮಾಡಿದ ತಪ್ಪಿಗೆ ಶಿಕ್ಷಕರಿಂದ ಉಡುಗೊರೆ ಪಡೆಯದೇ ಹಿಂದಿರುಗುವುದೇ ವಿರಳ. ಹೀಗೆ ದಿನಗಳನ್ನು ಕಳೆದು ಹೇಗೋ ಒಂದು ವರ್ಷ ಮುಗಿಯಿತು, ಅಷ್ಟರಲ್ಲೇ ಬಂತು “ಪರೀಕ್ಷೆ” ಎಂಬ ದೊಡ್ಡ ಭೂತ. ಅಲ್ಲಿಯವರೆಗೆ ಪಾಠದಲ್ಲಿ ಬರುವ ವಿವಿಧ ಸಂಶೋಧಕರ, ಲೇಖಕರ ಹೆಸರೇ ನೆನಪಿರುವುದಿಲ್ಲ ಆದರೇ ಅಂದು ಈ ಪರೀಕ್ಷೆ ಎನ್ನುವ ಧೈಯವನ್ನು ಕಂಡುಹಿಡಿದವನ ಮೇಲೆ ಶೋಧನೆ ನಡೆಸಿ ಸತ್ತು ಸ್ವರ್ಗದಲ್ಲೋ ನರಕದಲ್ಲೋ ಇರೋ ಆ ಮಹಾನುಭಾವನನ್ನು ಮತ್ತೇ ಕೊಲ್ಲಲು ಹಂಬಲಿಸುತ್ತೇವೆ. ಹೇಗೋ ಹಗಲು ರಾತ್ರಿಯನ್ನು ಒಂದು ಮಾಡಿ ಕಷ್ಟಪಟ್ಟು ಬೆವರು ಹರಿಸಿ ಪರೀಕ್ಷೆ ಹೆಗ್ಗೊ ಬರೆದು ಪಾಸ್ ಆಗುತ್ತೇವೆ. ಮತ್ತೆ ಬರುತ್ತೆ ನಮ್ಮೆಲ್ಲರ ನೆಚ್ಚಿನ ಗೆಳೆಯ “ಬೇಸಿಗೆಯ ರಜೆ” ವರ್ಷವಿಡೀ ಕಣ್ಣರಳಿಸದೇ ಕಾದುಕೂತ ಕ್ಷಣ, ಆದರೇ ಕಣ್ಣು ಮಿಟುಕಿಸುವಷ್ಟರಲ್ಲಿ ಅದೂ ಕಾಣದಾಗಿ ಹೊಗುತ್ತದೆ. ನಾಳೆ ಶಾಲೆ ಪ್ರಾರಂಭ ದಿನವಾದರೇ ಇಂದು ರಾತ್ರಿಯಿಡೀ ಜಾಗರಣೆ ಯಾಕೆ ಗೊತ್ತಲ್ಲ ಅದೇ ಬರೆದ ಪರೀಕ್ಷೆಯ ಪ್ರಶ್ನೆ-ಉತ್ತರಗಳನ್ನು ಮತ್ತೆ ಐದೋ-ಹತ್ತೋ ಸಲ ಬರೆದು ಪುತ ಖಾಲಿ ಮಾಡುವ ಕಾಯಕ. ಈ ಕೋಪದಲ್ಲಿ ಅಮ್ಮನ ಕಡೆಗೊಂದು ಪ್ರಶ್ನೆ “ಅಮ್ಮ ಈ ಶಾಲೆಯನ್ನೊಂದನ್ನ ಯಾರಮ್ಮಾ ಕಂಡುಹಿಡಿದದ್ದು ದೊಡ್ಡ ಕಿರಿ ಕಿರಿ ಇದು” ಆಗ ಅಮ್ಮನ ವೇದವಾಕ್ಯ “ನೋಡು 10ನೇ ತರಗತಿಯೊಂದನ್ನು ಚೆನ್ನಾಗಿ ಕಲಿತರೆ ಸಾಕು ಮತ್ತಿನ ಜೀವನ ತೀರಾ ಸುಗಮ”. ಇದೇ ಮಾತನ್ನು ಇಂಜಿನಿಯರಿಂಗ್ ವಿದ್ಯಾರ್ಥಿಗಳೂ ಸಹ ಬೆಳಿಗ್ಗೆ ತಿಂಡಿ, ಮದ್ಯಾಹ್ನ ಊಟ, ರಾತ್ರಿ ಊಟ ಹೇಗೆ ಸ್ವೀಕರಿಸುತ್ತಾರೋ ಅದೇ ರೀತಿ ಕೇಳುತ್ತಿದ್ದಾರೆ. ಈ ನುಡಿಮುತ್ತುಗಳ ಯಾವಾಗ ಸಾಧಿತವಾಗುವುದೋ ಅದ ಊಹಿಸಲು ಬಹಳ ಕಷ್ಟಸಾಧ್ಯ. ಹೀಗೆ 10ನೇ ತರಗತಿಯನ್ನು ಗುರುಗಳ ಆಶೀರ್ವಾದ, ಅಪ್ಪ ಅಮ್ಮನ ಆಶೀರ್ವಾದ ಅದೇ ರೀತಿ ಅವರ ಪ್ರೀತಿಯ ಬೈಗುಳದಿಂದ ಒಳ್ಳೆ ಅಂಕಗಳೊಂದಿಗೆ ಅದಕ್ಕೆ ಪೂರ್ಣವಿರಾಮ ನೀಡುತ್ತದೆ. ಆದರೆ ಯಾವಾಗ ಒಮ್ಮೆ ಈ ಜೈಲಿನಿಂದ ತೊಲಹಿದರೆ ಸಾಕು ಎಂದು ಬಯಸುತ್ತಿದ್ದ ಮನ, ಛೇ ಇಷ್ಟು ಬೇಗ ಯಾಕೆ ನನ್ನ ಶಾಲಾ ಜೀವನ ಮುಗಿಯಿತು ಎಂದು ಕೊರಗುತ್ತದೆ. ಒಮ್ಮೆ ಕಾಲೇಜು ಮೆಟ್ಟಿಲು ಹತ್ತಿದರೆ ಸಾಕೆನ್ನುವ ಹಂಬಲ, ಕರಗಿ ನೀರಾಗಿ ಮತ್ತೆ ಶಾಲೆ ಕಡೆ ಮುಖ ಮಾಡ ಬಯಸುತ್ತದೆ. ಏನೋ ಒಂದು ಸೆಳೆತ, ಕುಳಿತ ಬೆಂಚು, ಆಡಿದ ಆಟ, ಬೈದ ಮೇಷ್ಟ್ರು, ಕದ್ದು ಮರೆಸಿಕೊಂಡ ಜಾಗ ಇವೆಲ್ಲವೂ ಒಮ್ಮೆ ಕೈ ಬೀಸಿ ಕರೆದಂತೆ ಅನಿಸುತ್ತದೆ. ಮತ್ತೆ ಸಿಗಲಾರದ ಕ್ಷಣಗಳ ನೆನೆದಾಗ ಕಣ್ಣಂಚಲ್ಲಿ ನೀರು, ಏನೇ ಆಗಲೀ “Student Life Is a Golden Life” ಎನ್ನುವ ಮನವರಿಕೆ.



## ಭಯೋತ್ಪಾದನೆ

ಇಂದು ಬಯೋತ್ಪಾದನೆಯು ನಮ್ಮ ದೇಶವನ್ನು ಕಾಡುತ್ತಿರುವ ಗಂಭೀರ ಸಮಸ್ಯೆಗಳಲ್ಲಿ ಒಂದಾಗಿದೆ. ಭಯೋತ್ಪಾದನೆಯು ಇಡೀ ದೇಶದ ಅಭಿವೃದ್ಧಿಗೆ ಮಾರಕವಾಗಿದ್ದು ಅದರ ಮೂಲೋತ್ಪಾದನೆ ಅತ್ಯಗತ್ಯವಾಗಿದೆ.

ಭಯೋತ್ಪಾದನೆ ಎಂದರೆ ಸಮಾಜದಲ್ಲಿ ಭಯ ಹುಟ್ಟಿಸಿ ತಮಗೆ ಬೇಕಾದುದನ್ನು ಸಾಧಿಸಲು ಪ್ರಯತ್ನಿಸುವುದು. Sentor Bentons ನ ಪ್ರಕಾರ ಭಯೋತ್ಪಾದನೆ ಎಂದರೆ “ The Most widely practiced form of modern warfare.”

ಇಂದು ಉಗ್ರವಾದವು ದಿನದಿಂದ ದಿನಕ್ಕೆ ಹೆಚ್ಚುತ್ತಿದ್ದು, ವಿಮಾನ ಅಪಗಹರಣ, ಸಾರ್ವಜನಿಕ ಸ್ಥಳಗಳಲ್ಲಿ ಬಾಂಬ್ ದಾಳಿ, ಆತ್ಮಹುತಿ ದಾಳಿ ಪ್ರಕರಣಗಳೂ ಹೆಚ್ಚುತ್ತಿವೆ. ಭಯೋತ್ಪಾದನೆಗೆ ಅತೀ ಮುಖ್ಯ ಕಾರಣವೆಂದರೆ ಮತೀಯತೆ. ಕೆಲವು ಮತೀಯವಾದಿಗಳು ಯುವಕರ ಮನ ಪರಿವರ್ತಿಸಿ ಸಾಮರಸ್ಯದ ಬದಲು ದ್ವೇಷದ ಬೀಜ ಬಿತ್ತಿ ಅವರನ್ನು ಭಯೋತ್ಪಾದನೆಯತ್ತ ಆಕರ್ಷಿಸುತ್ತಿದ್ದಾರೆ. ಭಯೋತ್ಪಾದನೆಗೆ ನಿರುದ್ಯೋಗದ ಸಮಸ್ಯೆಯೂ ಒಂದು ಕಾರಣವಾಗಿದೆ. ಅತ್ಯಲ್ಪ ಅವಧಿಯಲ್ಲಿ ಶ್ರೀಮಂತನಾಗಬೇಕೆನ್ನುವ ಹುಚ್ಚು ಆಸೆಯೂ ಇದಕ್ಕೆ ಒಂದು ಕಾರಣ ಎನ್ನಬಹುದು. ಕೆಲವೊಂದು ರಾಷ್ಟ್ರಗಳೂ ಉಗ್ರವಾದಿಗಳಿಗೆ ಅಗತ್ಯ ನೆರವು ನೀಡಿ ಅವರನ್ನು ಸಲಹುತ್ತಿದೆ. ನಮ್ಮ ನೆರೆಯ ರಾಷ್ಟ್ರ ಪಾಕಿಸ್ತಾನ ಉಗ್ರರ ಅಡಗುತಾಣವಾಗಿದ್ದು, ಭಾರತಕ್ಕೆ ಬಹಳ ದೊಡ್ಡ ತಲೆನೋವಾಗಿ ಪರಿಣಮಿಸಿದೆ. ಇತ್ತೀಚೆಗೆ ಪುಲ್ವಾಮದಲ್ಲಿ ನಡೆದ ಆತ್ಮಹುತು ದಾಳಿಯನ್ನು ಯಾರೂ ಮರೆಯಲು ಸಾಧ್ಯವಿಲ್ಲ. ಅಮಾನುಷವಾಗಿ 44 ಯೋಧರು ಹುತಾತ್ಮರಾದರು.

ಭಯೋತ್ಪಾದನೆಯು ಒಂದು ಜಾಗತಿಕ ಸಮಸ್ಯೆಯಾಗಿದ್ದು, ಇತ್ತೀಚಿನ ವರ್ಷಗಳಲ್ಲಿ ಅದು ತನ್ನ ಎಲ್ಲೆ ಮೀರಿ ಸಾಗುತ್ತಿದೆ. ಬಹುಶಃ ಇದಲ್ಲಕ್ಕೂ ಕಡಿವಾಣ ಹಾಕುವ ಸಮಯ ಕೂಡಿಬಂದಿದೆ ಎಂದೆನಿಸುತ್ತದೆ. ಇತ್ತೀಚೆಗೆ ಭಾರತೀಯ ವಾಯುಸೇನೆಯ ಸಾಹಸದಿಂದ 300 ಕ್ಕೂ ಅಧಿಕ ಉಗ್ರರನ್ನು ನಾಶಗೊಳಿಸಲಾಯಿತು. ಜೊತೆಗೆ ಅವರ ಅಡಗುತಾಣಗಳನ್ನೂ

ದ್ವಂಸಗೊಳಿಸಿದರು. ಈ ಕಾರ್ಯ ನಿಜಕ್ಕೂ ಶ್ಲಾಘನೀಯ. ಆದರೆ ಇದು ಭಯೋತ್ಪಾದನೆಯನ್ನು ಬೇರು ಸಮೇತ ಕಿತ್ತು ತೆಗೆಯದು. ಭಯೋತ್ಪಾದನೆಯ ನಿಗ್ರಹಕ್ಕೆ ಎಲ್ಲಾ ರಾಷ್ಟ್ರಗಳೂ ಕೈಜೋಡಿಸಬೇಕು. ಭಯೋತ್ಪಾದನೆಯ ನಿಗ್ರಹಕ್ಕೆ ಯುದ್ಧವೊಂದೇ ಪರಿಹಾರವಲ್ಲ. ಆದಷ್ಟು ಶಾಂತಿಯಿಂದ ಪರಿಹರಿಸಲು ಪ್ರಯತ್ನಿಸಬೇಕು. ಇಲ್ಲದಿದ್ದರೆ ಸೇಡಿಗೆ ಸೇಡು ಎಮಬುದು ಬೆಳೆಯುತ್ತಾ ಹೋಗುತ್ತದೆ. ಧಾರ್ಮಿಕ ಮುಖಂಡರು ಸಾಮರಸ್ಯ, ಧರ್ಮ ಸಹಿಷ್ಣುತೆಯನ್ನು ಪ್ರತಿಪಾದಿಸಬೇಕು.

ಉಗ್ರವಾದವನ್ನು ಹತ್ತಿಕ್ಕಬೇಕಾದರೆ ಮೊದಲು ದ್ವೇಷ, ಅಸೂಯೆ, ಮತೀಯತೆಯಂತಹ ಅಗೋಚರ ಶಸ್ತ್ರಗಳನ್ನು ನಾಶಗೊಳಿಸಬೇಕು. ಒಂದು ರಾಷ್ಟ್ರದ ಪ್ರಗತಿಯಾಗಬೇಕಾದರೆ ಶಾಂತಿ ಅತ್ಯಗತ್ಯ. ಇಲ್ಲದಿದ್ದಲ್ಲಿ ಸರ್ವನಾಶ ನಿಶ್ಚಿತ. ಆದ್ದರಿಂದ ಮುಂದಿನ ಪೀಳಿಗೆಯನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡಾದರೂ, ದ್ವೇಷದ ಗೋಡೆಯನ್ನು ಕೆಡವಿ, ಸಾಮರಸ್ಯದಿಂದ ಎಲ್ಲಾ ದರ್ಮದವರು ಒಂದಾಗಿ ಬಾಳಬೇಕು. ಆ ಮೂಲಕ ಆಧುನಿಕ ನವಭಾರತಕ್ಕೆ ಮುನ್ನುಡಿಯಾಗೋಣ.



## ಅಮ್ಮ

ಅಮ್ಮನ ಮಮತೆಯ ಅರಿಯದವರಿಲ್ಲ  
ಅವಳ ಪ್ರೀತಿ ಮಮಕಾರಕ್ಕೆ ಸರಿಸಾಟಿಯಿಲ್ಲ  
ಮೊದಲ ತುತ್ತು ಕೊಟ್ಟವಳು ಅವಳೇ  
ನೋವಾದಾಗಲೆಲ್ಲ ನೆನಪಾಗುವವಳು ಅವಳೇ  
ಮೊದಲಕ್ಷರ ಕಲಿಸಿದವಳು ಅವಳು  
ಜೀವನದ ಪಾಠವ ಭೋದಿಸಿದಳು  
ತಪ್ಪು ಹೆಜ್ಜೆ ಇಟ್ಟಾಗ ತಿದ್ದಿದಳು  
ಉತ್ತಮ ದಾರಿಯ ತೋರಿದಳು  
ಪ್ರೀತಿಗೆ ಮೊದಲ ಹೆಸರೇ ಅಮ್ಮ  
ಕೋಪಿಸಿಕೊಂಡರೆ ಅವಳೇ ಗುಮ್ಮ  
ಮಗು ನಕ್ಕಾಗ ತಾನು ನಗುವಳು  
ಮಗು ಅತ್ತಾಗ ತಾನು ಅಳುವಳು  
ಕರುಳ ಬಳ್ಳಿಯ ಈ ಬಂಧ  
ಎಂದಿಗೂ ಕೊನೆಗಾಣುವುದಿಲ್ಲ

Ms. HARSHITHA H.  
Lab Instructor, EC Dept.

## ಮುಸ್ಸಂಜೆ

ಮುಂಜಾನೆ ಕಳೆದು ರವಿ ಮನೆಗೆ ಹೊರಟ  
ತಂಪಾದಗಾಳಿಯ ಉಯ್ಯಾಲೆಯಲಿ ತೇಲುತ್ತ  
ಹಕ್ಕಿಗಳ ಚಿಲಿಪಿಲಿಯ ದನಿಯೊಂದಿಗೆ  
ಆಕಾಶವ ಕೆಂಪಾಗಿಸಿದ  
ಜೀವ ಉಗಮಿಸುವ ಹುಟ್ಟೆಂಬ ದಿಕ್ಕಲ್ಲಿ ಮೂಡುತ್ತಾ  
ಸಂಸಾರವೆಂಬ ಆಕಾಶದಲ್ಲಿ ಹೊಳೆಯುತ್ತಾ  
ಪ್ರೀತಿ ಸ್ನೇಹ ವಿಶ್ವಾಸವೆಂಬ ಬೆಳಕನ್ನು ಚೆಲ್ಲುತ್ತಾ  
ಈ ಭೂಮಿಗೆ ಆಸರೆಯಾದ  
ಎಲ್ಲ ಮುಗಿಸಿ ಕೊನೆಗೆ ನೇಪಥ್ಯಕ್ಕೆ ಸರಿದ  
ಯಯವನವ ಕಳೆದುಕೊಂಡು ಮುಪ್ಪಾದ  
ಮನಸಿನ ಎಲ್ಲಾ ಭಾವನೆಗಳಿಗೂ ಬಂಧನಗಳಿಗೂ  
ಮುಕ್ತಿನೀಡಿ ಮುಸ್ಸಂಜೆ ಆಕಾಶದಿ ಮರೆಯಾದ

Mr. KRITHIKA K.  
2<sup>nd</sup> Year EC

## ಮೂರು ದಿನದ ಬದುಕು

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ಬೆಳಕಿನ ವೇಷದ ಹಂಗು  
ಅಸ್ಪಷ್ಟ ಕನಸಿನ ಓಟಕ್ಕೆ  
ಘರ್ಷಣೆ ಕಾರ್ಮುಗಿಲಿನ ದಂಗು  
ಮೂರು ದಿನದ ಓಟವೋ ಈ ಮಾನವ  
ಬಿಡು ನಿನ್ನ ದ್ವೇಷ, ಅಹಂಗಳ ಗುಂಗು

Mr. ADITHYA HEGDE  
2<sup>nd</sup> Year EC

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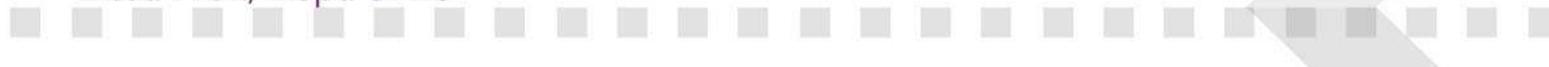




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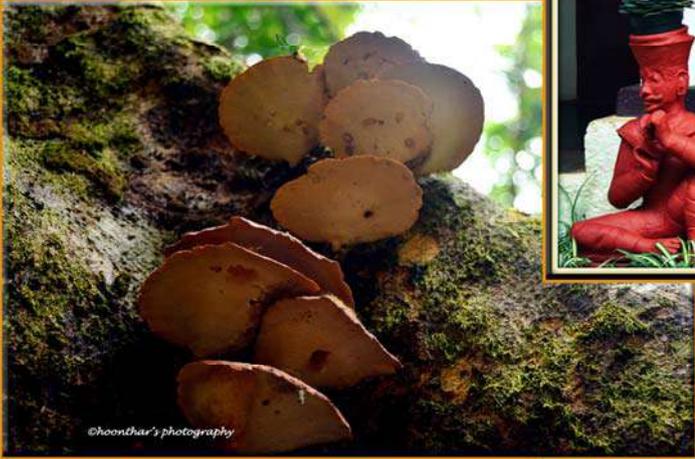


Mr. NAVEENA C.  
Asst. Prof., Dept. of EC

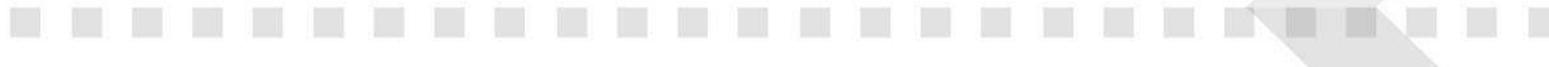




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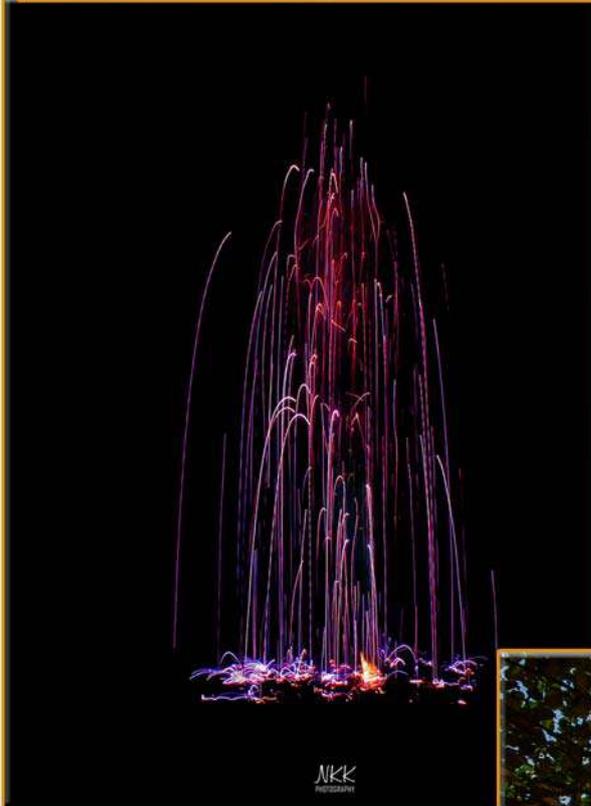
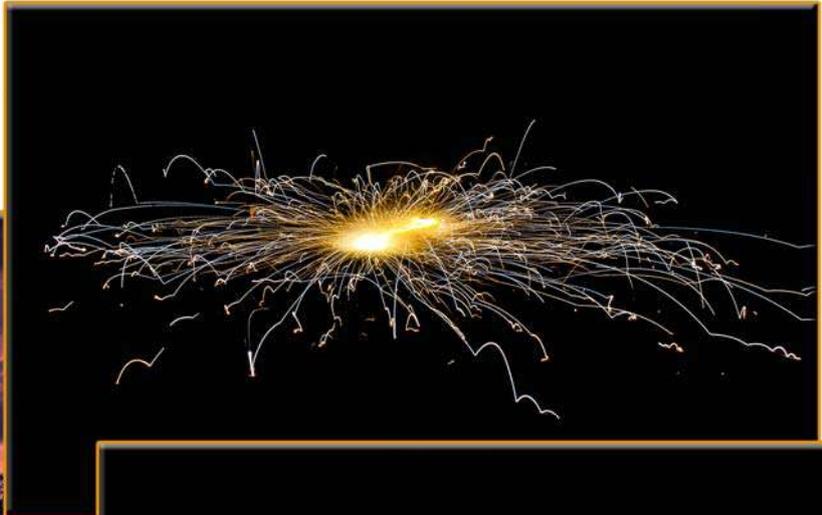


Mr. NAVEENA C.  
Asst. Prof., Dept. of EC





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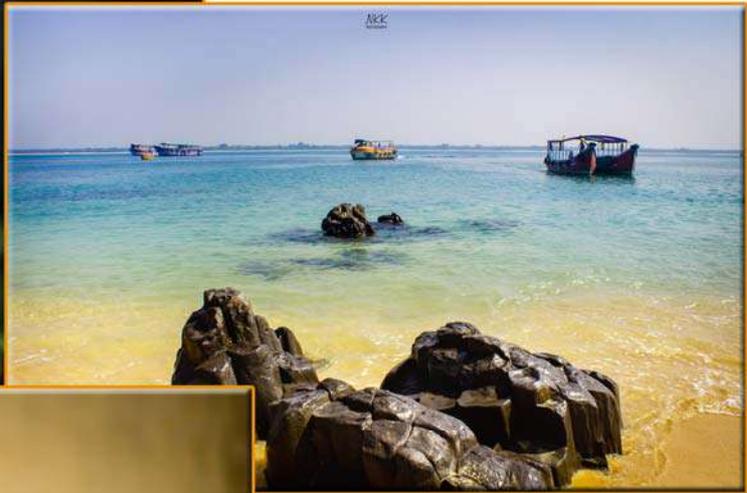


Mr. KEERTHAN KOLATHAYA  
4<sup>th</sup> Year EC





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Mr. KEERTHAN KOLATHAYA  
4<sup>th</sup> Year EC

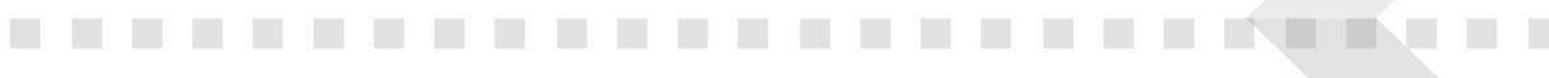




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Mr. VARUN  
3<sup>rd</sup> Year EC





# 2018-2019 OUTGOING BATCH STUDENTS



AKHIL P  
S/O UDANESHWARA Puttur  
9901035439  
akhilpputtur@gmail.com



AKSHATHA  
D/O MOHANDASA VITTAL  
8722662946  
akshathakarkera22@gmail.com



AKSHAYA SHETTY B  
S/O JAGANNATHA SHETTY  
KASARAGOD  
8105181731  
akshayshettyasb@gmail.com



AMRUTHA B B  
D/O BOPAIAH B R KUSHALNAGAR  
9495483964



ANUSHA J  
D/O S JAGADEESH HONNAVAR  
8546808738  
anushaj0319@gmail.com



APOORVA H  
D/O THANUJA KUMAR SHETTY  
HIREBANDADY,UPPINANGADI  
8861380920  
shettyapoorva22@gmail.com



AVINASH C  
S/O CHANDRU C PUTTUR  
8792658825  
881997cavinash@gmail.com



B PRITHVI C RAI  
D/O CHANDRAHASA RAI B PUTTUR  
9663754724  
prithvi.crai@gmail.com



CHAITHRA C SHETTY  
D/O CHANDRAHASA SHETTY NELLYADI  
9945554498  
chaithrashetty198@gmail.com



CHINMAYI SM  
D/O MANJU SATHYAN TURUVEKERE  
9964380548  
chinmayisathyan7@gmail.com



DEEKSHA A T  
D/O THIMMAPPA GOWDA A  
CHARVAKA  
8296842100  
deekshaat3@gmail.com



DEEPAK N  
S/O NARASIMHAMURTHY  
BENGALURU  
7411859881  
deepaknmurthy@gmail.com



DEEPTHI K  
D/O DINESH KADABA  
9483051987  
deepthirao950@gmail.com



DEEPTHI RAI M  
D/O RAMESH RAI M PUTTUR  
9482397009  
deepthiraim1997@gmail.com



DHANUSHA H  
D/O MADHAVA KURNAD  
9632604735  
dhanushashriyan98@gmail.com



GAYANA ACHARI  
D/O RAMESH N ACHARI SIRSI  
8277647035  
gayanaachari2@gmail.com



GOWTHAMI  
D/O CHENNAPPA K BELTHANGADI  
9108822863  
gowthamibalanja@gmail.com



HARSHITA SHANKAR NAIK  
D/O SHANKAR NAIK KUMTA  
9902781286  
harshisnaik@gmail.com



HARSHITHA K K  
D/O KUSUMADHARA GOWDA K  
SULLIA  
7022707453  
lancu344@gmail.com



JAGANNATHA K  
S/O NAGAPPA GOWDA V VITLA  
9902577281  
jagannatha.kanathadka@gmail.com



JITHESH JAIN  
S/O JEEVANDHAR JAIN PUTTUR  
9448858190  
jitheshjain2065@gmail.com



JYOTHISHREE  
D/O P JAYARAM PUTTUR  
9741847157  
jyothishree1498@gmail.com



K PREETEEESH RAVIKUMAR  
KOTEGAR  
S/O RAVIKUMAR VASUDEV SIRSI  
7899155651  
k.preeteesh@hotmail.com



KANTHI G  
D/O GANAPATHI K SAGAR  
9449935678  
kanthipatel713@gmail.com



KARTHIK K  
S/O NARAYANA K KATUKUKKE  
8547220306  
karthikvaniyan237@gmail.com



KAVERI A  
D/O ALAGU S KODAGU



KEERTHAN C S  
D/O SEETHARAMA C SULLIA  
9901650440  
keerthancsgowda@gmail.com



KEERTHAN KOLATHAYA N  
S/O KISHOR KOLATHAYA N PUTTUR  
8277300505  
keerthankolathaya@gmail.com



KESHAVAPRASAD B V  
S/O VISHNUMOORTHY B PUTTUR  
8197684556  
kprasadb619@gmail.com



KIRAN HEBBAR A  
S/O ARAVINDA HEBBAR A PUTTUR  
9743795253  
kiranhebbar97@gmail.com



KRISHNAMOORTHY H  
S/O RADHAKRISHNA BHAT  
KASARAGOD  
8943824538  
kmbhat49@gmail.com



MAHANTESH HANAMANT ATHANI  
S/O HANAMANTH AMBAGI  
9035924462  
mahanteshh640@gmail.com



MAMATHA S  
D/O SHANKAR MANGALORE  
9880599706  
mammus835@gmail.com



# 2018-2019 OUTGOING BATCH STUDENTS



POOJA  
D/O NARAYANA MOODBIDRI  
9008895789  
poojampoojam214@gmail.com



PRADYUMNA SHARMA M K  
S/O M NARAYANA BHAT KERALA  
9447559116



PRAFULLA B PRABHU  
D/O BALAKRISHNA  
PUNACHAKASARAGOD  
9448893211  
prafullaprabhu20@gmail.com



PREETHI K  
D/O K PADMANABHA PUTTUR  
9945006782  
preethik99964@gmail.com



PRUTHVISHAILA  
D/O SHANKAR NAYAK  
BANTWAL  
9448183770  
pruthvishailanayak@gmail.com



RAGHAVENDRA V  
S/O VJENDRA K N THIRTHAHALLI  
9480615384



RASHMI R  
D/O RAMAKRISHNA P.T PUTTUR  
9449743889



RAVI BHAT.B  
S/O RAGHURAMA B PERAJE  
8762369721  
ravi11051997@gmail.com



SAMPATH G SHENOJ  
S/O GIRIDHAR SHENOY UDUPI



SANDESH RAMESH NAIK  
S/O RAMESH NAIK SIRSI  
7406990457



SANIYA TAJ  
D/O MOHAMMED IDRIS MUDIGERE  
7899665929  
saniyataj321@gmail.com



SATHVIKA  
D/O JAYARAM SHETTY  
UPPINANGADY  
9483919305



SHAINITHA. U. M  
D/O MANKU GOWDA U PUTTUR  
9483912303



SHASHANK G RAO  
S/O GANESH RAO K MANGALORE



SHASHWATH NG  
S/O N V GOPAL HEMAKKI  
8971411376  
ngshashwath@gmail.com



SHETTY DEEKSHA VISHWANATH  
D/O VISHWANATH R Manglore  
9972375117



SHILPA D RAI  
D/O DEVIPRASAD RAI MANGALORE  
8105029798  
shilpa18vs@gmail.com



SHRIJITH P.S  
S/O SUDHAKARA P.A  
BHAGAMANDALA, MADIKERI  
9482975891  
shrijithps89@gmail.com



SHWETHA B.S  
D/O LATE SHIVARAMA PUTTUR  
9632285070  
shwethabsshetty@gmail.com



SHYBHYA SHETTY S  
D/O BHASKARA SHETTY S  
ADYANADKA  
9496949132  
shybhassetty@gmail.com



SHYLESH KUMAR G Y  
S/O YOGISH NAIK K PUTTUR  
9483601784  
shylesh.shyieshkumar.kumar@gmail.com



SINDURA SARASWATHI  
D/O MURALIDHAR BHAT PUTTUR  
9591145400



SRIDHARA B P  
S/O PUTTASWAMY B S KADUR  
9743999349



SOURAB M  
S/O VED KUMAR M PUTTUR  
8197989385  
saurabm10@gmail.com



SUJITH B  
S/O VASANTHA GOWDA  
SAVANOOR  
9880374903  
sujithsavanoor@gmail.com



SUKEESH RAJ KADAMBALITHAYA  
M R  
S/O RAMANANDA M K MULLERIA  
9449238749  
sukeeshraj@gmail.com



SUSHMITHA S M  
D/O MAHABALESHWAR S S SAGAR  
9481541105  
sushmitha7797@gmail.com



SUPRITHA H D  
D/O DHARMASWAMY H R HASSAN  
8722601550  
suprithahd97@gmail.com



SURAKSHA  
D/O DAMODARA RAI  
8105895547  
suraksharai437@gmail.com



SWAJAN  
S/O BHASKARA RAI M PUTTUR  
8762281413  
swajan6782@gmail.com



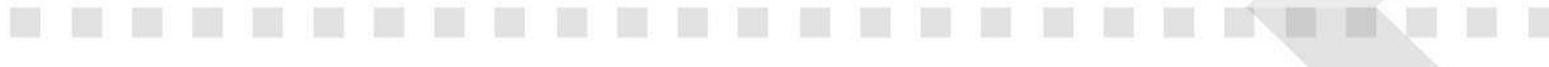
TEJASWINI KINI  
D/O GURUDATHA KINI MANGLORE  
9686346912  
kini6882@gmail.com



ULLAS KUMR A  
S/O SHASHIDHAR ALADANNGADY  
9480852711  
ullasarva@gmail.com



VARSHA H SHETTY  
D/O HARISHA M S HASSAN  
9964885855  
shettyvarsha987@gmail.com





## 2018-2019 OUTGOING BATCH STUDENTS



MANEESH M S  
S/O Shivarama M KEDILA  
8861712844  
maneeshms1997@gmail.com



MEGHANA D  
D/O DEVAYYA GOWDA A PUTTUR  
8277260979  
meghanadevasya@gmail.com



MEGHANA H S  
D/O SHIVAPPA K ANNECHAKANAHALLI  
9591735906  
meghanabsm@gmail.com



MEGHANA V  
D/O VARGHESE T G NELLYADY  
9449104515  
meghavg@gmail.com



NAGENDRA SUBRAY HEGDE  
S/O SUBRAY NARAYAN HEGDE SIRSI  
9986911245  
naghegde13@gmail.com



NISHA K  
D/O GANGADHARA GOWDA K PUTTUR  
8904789685  
nishasanjayanagara@gmail.com



NISHMA N RAI  
D/O NAVEEN RAI KALLUGUNDI  
9448477213  
nishmanrai09@gmail.com



NITHIN  
S/O KUNCHAPPA MOOLYA PADANGADY  
nithinkulal108@gmail.com



NIVEDITHA KALLIMANI  
D/O NAGAPPA KALLIMANI BIJAPUR  
9535082640



PAVAN SATYANARAYAN BHAT  
S/O SATYANARAYAN S BHAT YANA  
9481631346



PRATHEEK M HOLLA  
S/O H M PRAFULLACHANDRA PUTTUR  
8197296275  
hollapratheek@gmail.com



ROSHAN NAYAK  
S/O BHASKARA NAYAK KERALA  
8494886449  
roshanshan.999@gmail.com



SHIVAKUMARA PAKIRAPPA PALLEDDA  
S/O PAKIRAPPA PALLEDDA GADAG  
9686009524



SOWMYA B M  
D/O MAHADEVA BOODANURU  
8746057469  
sowmyabm1997@gmail.com



SUBRAMANYA  
S/O SEETHARAMA SHETTY PUTTUR



SUJATHA A  
D/O RAMANNA GOWDA HEMAJE



SURESH KUMAR K  
S/O V KAMALESAN PUTTUR  
8495068417



SWATHI  
D/O LALITHU POOJARY BARIMAR  
8970397715  
swathipoojari.2828@gmail.com



VARSHA N A  
D/O ACHUTHAN N KASARAGOD  
9495483964



VENKATESH KRISHNA BHAT  
S/O KRISHNA VENKATRAMANA  
BHAT BHATKAL  
8147217161  
venkateshbhat93@gmail.com



VIDYA LAKSHMI P  
D/O SHANKARA BHAT VITLA  
9482352265  
vidyavidhi8@gmail.com



VIGNESHA K M  
S/O PARAMESHWARA BHAT PUTTUR



VILAS H J  
S/O JAYACHANDRA H B HUMCHA  
9611615163  
vilasjain147@gmail.com



YASHA  
S/O CHIDANANDA K KASARAGOD  
9481382609  
yashakedagadi123@gmail.com



YASHWITH KUMAR K V  
S/O VASU SALYAN PUTTUR  
7899584331



VARSHA K P  
D/O PREMKUMAR K T HASSAN  
7899193584  
varshakprem@gmail.com



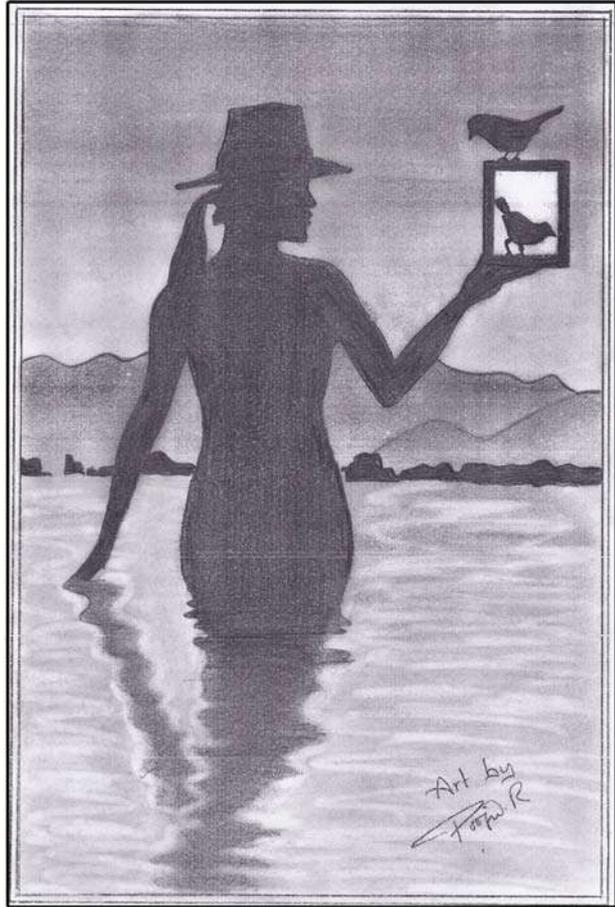


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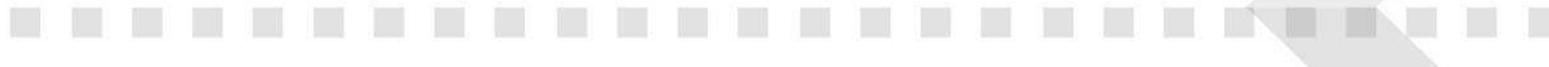


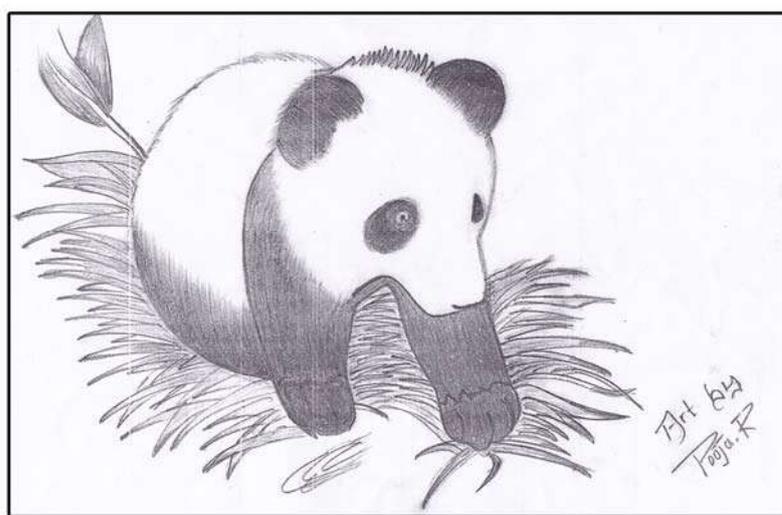


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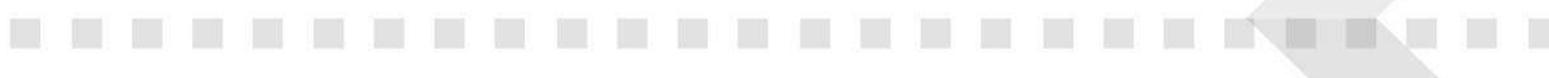


Ms. POOJA R.  
4<sup>th</sup> Year EC





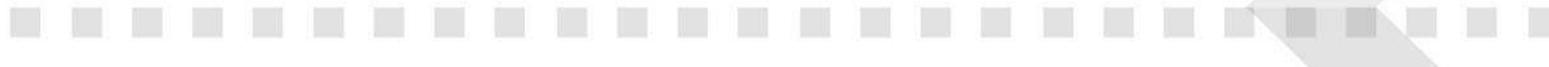
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Mr. SHARATH  
2<sup>nd</sup> Year EC



# PLACED STUDENTS



ANUSHA J  
4VP15EC004  
TCS



AVINASH C  
4VP15EC006  
MPHASIS



B PRITHVI C RAI  
4VP15EC007  
THOUGHT FOCUS,  
MPHASIS



DHANUSHA H  
4VP15EC013  
INFOSYS



HARSHITA S NAIK  
4VP15EC015  
ROBOSOFT, TCS



HARSHITHA K K  
4VP15EC016  
BIBOX



JITHESH JAIN  
4VP15EC018  
TCS



JYOTHISHREE  
4VP15EC019  
MPHASIS, WIPRO



KARTHIK K  
4VP15EC022  
WIPRO



KEERTHAN KOLATHAYA N  
4VP15EC025  
INFOSYS



KESHAVAPRASAD B V  
4VP15EC026  
INFOSYS



KIRAN HEBBAR  
4VP15EC027  
KARMIC DESIGN



MANEESH M S  
4VP15EC031  
ROBOSOFT, TCS,  
ACCORD, WIPRO



PRAFULLA B PRABHU  
4VP15EC043  
THOUGHT FOCUS  
WIPRO



PREETHI K  
4VP15EC045  
SLK SOFTWARE



PRUTHIVISHAILA  
4VP15EC046  
SLK SOFTWARE



RASHMI R  
4VP15EC048  
TCS



SANDESH RAMESH NAIK  
4VP15EC050  
TCS



SANIYA TAJ  
4VP15EC051  
TCS



SHETTY DEEKSHA VISHWANATH  
4VP15EC056  
BIBOX



SINDURA SARASWATHI  
4VP15EC063  
ROBOSOFT, TCS, TESSOLVE  
SEMI CONDUCTOR, WIPRO



TEJASWINI KINI  
4VP15EC072  
INFOSYS



ULLAS KUMAR A  
4VP15EC073  
SLK SOFTWARE, VICARA



VARSHA N A  
4VP15EC076  
SLK



ROSHAN BHASKARA NAYAK  
4VP16EC043  
BIBOX



SOURAB M  
4VP15EC064  
BIBOX LABS



DEEPAK N.  
4VP15EC010  
CREATORS TECHNOLOGY  
SOLUTIONS



JAGANNATHA K  
4VP15EC017  
CREATORS TECHNOLOGY  
SOLUTIONS



RAGHAVENDRA V  
4VP15EC047  
CREATORS TECHNOLOGY  
SOLUTIONS,  
SILVERPEAK GLOBAL



RAVI BHAT B  
4VP15EC049  
CREATORS TECHNOLOGY  
SOLUTIONS

# PLACED STUDENTS



SHYLESH KUMAR G Y  
4VP15EC062  
MACHINE HOUSE  
TECHNOLOGIES,  
CREATORS TECHNOLOGY  
SOLUTIONS



VILAS H J  
4VP15EC079  
SILVERPEAK GLOBAL,  
CREATORS TECHNOLOGY  
SOLUTIONS



MAMATHA S  
4VP15EC030  
ETHNUS



MEGHANA D  
4VP15EC032  
ETHNUS



SWATHI  
4VP16EC409  
ETHNUS



PRATHEEK M HOLLA  
4VP15EC084  
GREEN PRINT  
TECHNOLOGIES



NAGENDRA SUBRAY HEGDE  
4VP15EC034  
L&T Infotech



K PREETEESH  
RAVIKUMAR KOTEGAR  
4VP15EC020  
MACHINE HOUSE  
TECHNOLOGIES



CHAITHRA C SHETTY  
4VP15EC008  
SILVERPEAK GLOBAL  
Q SPIDER



DEEPTHI RAI M  
4VP15EC012  
SILVERPEAK GLOBAL  
Q SPIDER



NISHMA N RAI  
4VP15EC036  
UNIKAIHATSU  
SOFTWARE



KANTHI G  
4VP15EC021  
PATHFRONT



AKSHAYA SHETTY B  
4VP15EC003  
PATHFRONT



APOORVA H  
4VP15EC005  
PATHFRONT



SUSHMITHA S M  
4VP15EC070  
PATHFRONT



VARSHA H SHETTY  
4VP15EC074  
SILVERPEAK GLOBAL  
PATHFRONT



SHAINITHA U M  
4VP15EC053  
SILVERPEAK GLOBAL  
PATHFRONT



AKHIL P  
4VP16EC400  
PATHFRONT



GAYANA ACHARI  
4VP15EC014  
PATHFRONT



SUKEESH RAJ  
KADAMBALITHAYA M  
R4VP15EC067  
PATHFRONT



SWAJAN  
4VP15EC071  
PATHFRONT



YASHA  
4VP15EC082  
PATHFRONT



SHILPA D RAI  
4VP15EC057  
Q SPIDER



AKSHATHA  
4VP15EC002  
SILVERPEAK GLOBAL



DEEPTHI K  
4VP15EC011  
SILVERPEAK GLOBAL



MEGHANA V  
4VP15EC033  
SILVERPEAK GLOBAL



NISHA K  
4VP15EC035  
SILVERPEAK GLOBAL



PAVAN SATYANARAYAN BHAT  
4VP15EC039  
SILVERPEAK GLOBAL



SHYBHYA SHETTY S  
4VP15EC061  
SILVERPEAK GLOBAL



VENKATESH KRISHNA BHAT  
4VP15EC077  
SILVERPEAK GLOBAL  
SMEC



## OUTGOING BATCH

### SECTION-A



### SECTION-B





## TEACHING STAFF



## NON TEACHING STAFF



## Face Difficulties Positively

A farmer who owned an old mule. The mule fell into the farmer's well. The farmer heard the mule praying or whatever mules do when they fall into wells.

After carefully assessing the situation, the farmer sympathized with the mule, but decided that neither the mule nor the well was worth the trouble of saving. Instead, he called his neighbors together, told them what had happened, and enlisted them to help haul dirt to bury the old mule in the well and put him out of his misery.

Initially the old mule was hysterical! But as the farmer and his neighbors continued shoveling and the dirt hit his back, a thought struck him. It suddenly dawned on him that every time a shovel load of dirt landed on his back,  
**HE WOULD SHAKE IT OFF AND STEP UP!**

This he did, blow after blow. "Shake it off and step up... shake it off and step up... shake it off and step up!" He repeated to encourage himself. No matter how painful the blows, or how distressing the situation seemed, the old mule fought panic and just kept right on  
**SHAKING IT OFF AND STEPPING UP!**

It wasn't long before the old mule, battered and exhausted, stepped triumphantly over the wall of that well! What seemed like it would bury him actually helped him ... all because of the manner in which he handled his adversity.

**THAT'S LIFE!** If we face our problems and respond to them positively, and refuse to give in to panic, bitterness, or self-pity.

