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Bapuji Institute of Engineering and Technology
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BIETECH VOICE

Department of ECE

A HALF YEARLY NEWSLETTER OF
ELECTRONICS & COMMUNICATION ENGG.

Volume - 5, Issue - 2 January – June 2022

Vision: To be in the forefront in providing quality technical education and research in Electronics & Communication Engineering to produce skilled professionals to cater to the challenges of the society.

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ACITE
Bapuji Educational Association (Regd.)
BAPUJI INSTITUTE OF ENGINEERING & TECHNOLOGY
DAVANGERE-577004
AICTE-ISTE Sponsored
One Week Online Faculty Development Programme
on
ELECTRONIC ASSISTIVE DEVICES
7th - 13th January 2022
Organized by
Department of Electronics & Communication Engineering
Internal Quality Assurance Cell, BIET, Davangere

19th to 24th
April 2022
(Blended Mode)

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Department of Electronics & Communication Engineering
(Accredited by NBA)

in association with
FOSS Group, Visvesvaraya Technological University, Belagavi
Organizes
One Week Faculty Development Program
on
Embarking on Open Source Software in an Engineering & Research Journey

Coordinator
Dr. G. S. Sunitha
Professor & Head

Inside the Issue

- Departmental Activities
- Student Achievements /Activities
- Faculty Achievements /Activities
- Articles
- Literary Contribution
- Alumni Corner

Quote Corner

*“Two rules for a peaceful life:
Depression in failure should
never go to heart, and ego in
success should never go to the
brain.”*

Chairman/ Editor
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Mission:

- M1. To facilitate the students with profound technical knowledge through effective teaching learning process for a successful career.
- M2. To impart quality education to strengthen students to meet the industry standards and face confidently the challenges in the program.
- M3. To develop the essence of innovation and research among students and faculty by providing infrastructure and a conducive environment.
- M4. To inculcate the student community with ethical values, communication skills, leadership qualities, entrepreneurial skills and lifelong learning to meet the societal needs.

Scientific Foundations of Health

Good Health and It's balance for positive mindset

Physical fitness is not the sole basis of being healthy; being healthy means being mentally and emotionally fit. Being healthy should be part of overall lifestyle. Living a healthy lifestyle can help prevent chronic diseases and long-term illnesses. Feeling good about ourself and taking care of health are important for self-esteem and self-image. Maintain a healthy lifestyle by doing what is right for the body.

“One small positive thought can change the whole day”- Zig Ziglar.

Developing Healthy Diet for Good Health

Prepare most of meals at home using whole or minimally processed foods. Choose from a variety of different proteins to keep things interesting. Make an eating plan each week. Choose recipes with plenty of vegetables and fruit. The goal is to fill half plate with vegetables and fruit at every meal. Choose brightly colored fruits and vegetables each day, especially orange and dark green vegetables. Avoid sugary drinks and instead drink water. Lower-fat, unsweetened milk is also a good way to stay hydrated. Eat smaller meals more often. Eat at least three meals a day with snacks in between. When we wait too long to eat there are more likely to make unhealthy food choices.

Why communication is key to healthy relationships

- **Communication** is important in any relationship, as it allows to effectively share feelings, opinions and expectations.

From HOD's Desk



I am happy that we are bringing out the second issue of volume 5.

I am glad to share that department has a credit of organizing two FDPs- one week AICTE-ISTE sponsored Induction/Refresher Programme (online) on **Electronic Assistive Devices** for faculty and one week FDP on **Embarking on Open Source Software in an Engineering & Research Journey** in association with FOSS group, VTU, Belagavi.

Under Gnana Vrudhi lecture series, faculty delivered talks on Embedded and VLSI domain.

Skill development program is initiated in the department for I year students on **Simple Electronic Circuits and their Applications**.

Congratulate Mrs. Savithri G R for receiving Best Paper Award for the paper titled Design of Four Port Router for Network on Chip.

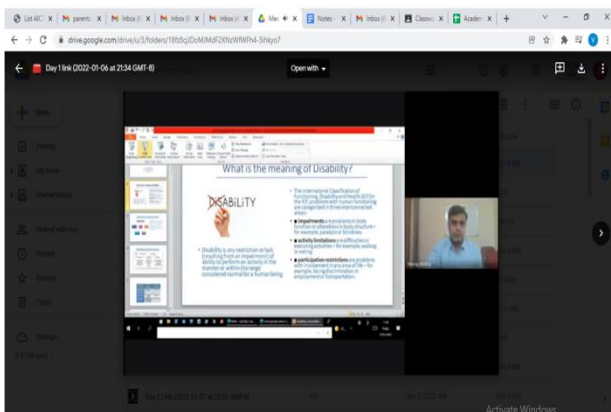
Online paper presentation Papyrus – 2K22 and Cognition was successfully organized with active participation of the students.

Congratulate the research scholar Mr. Prakash K M for completion of Ph.D. degree.

- **Get to Know Each Other:** The key to determining whether we're compatible with another person is to communicate with them from the offset.
- **Avoid Misunderstanding:** Another reason to communicate effectively is to avoid any misunderstandings, which can lead to a breakdown of communication or the relationship as a whole.

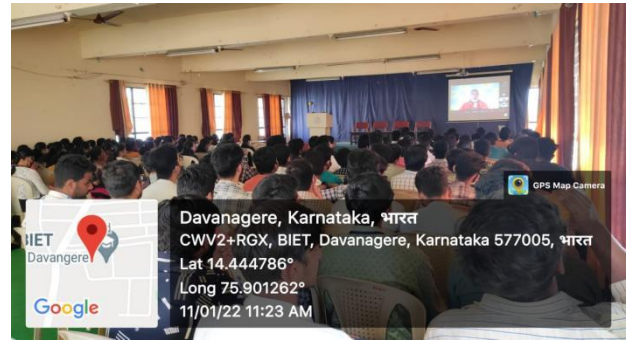
DEPARTMENTAL ACTIVITIES

- Organized one week AICTE-ISTE sponsored Induction/Refresher Programme (online) on **Electronic Assistive Devices** for faculty of technical institution, medical, industry professionals and researchers from 7th to 13th January 2022 in association with Dr. Gnanavel, Director of CRC and faculty of CRC Davangere. The program was coordinated by Dr. B M Jayadevappa, Dr. G H Leela, Mr. Kiran Kumar G H, Mrs. Savithri G R and Mrs. Shwetha S, under the guidance of Dr. G S Sunitha Prof. and Head, Department of E&CE.



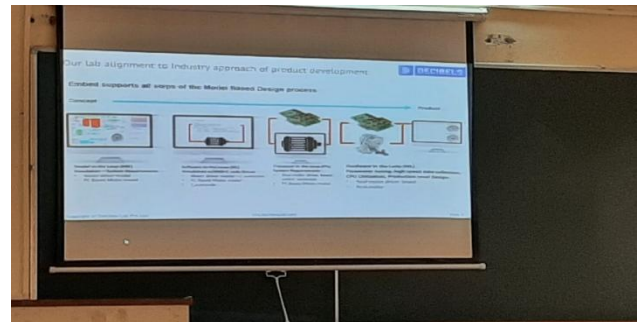
Electronic Assistive Devices from 7th to 13th January 2022

- Webinar on **Universal Human Values and Social Responsibilities among youth** by Sri. Kailash Satyarthi, Nobel Peace Laureate, organized by VTU, Belagavi on 11th January 2022.



UHV by Sri. Kailash Satyarthi

- Mr. Suraj, Co-Founder and CEO, Decibels Labs Pvt. Ltd. delivered a presentation on **Electrical Vehicle** in the Department of E&CE on 27th January 2022.



Presentation on Electrical Vehicle Lab setup

- Celebrated **National Voters Day -2022** on 25th January 2022.



Voters Day Pledge delivering by Principal and Director

- Organized a motivational talk to carry out **Social Concern Related Activities** by Shankar Pednekar, Alumni 1993 batch on 22nd January 2022.
- Conducted Two day workshop on **Electronic Circuit Prototyping and Application Development** in association with **Altlogic Technologies** for III Semester students on 7th & 8th February 2022.



Discussion with Principal and Director

- The Department has been **accredited by NBA for 3 years**, from 2021 to 2024 for the academic year 2021-22, 2022-23, and 2023-24, Dr. Vineeth Sahula, Professor in E&CE from Malaviya National Institute of Technology, Jaipur was the expert for E&CE Department..

- Conducted skill development program for I year students of the institute on **Simple Electronic Circuits and their Applications** from 14th to 22nd March 2022.



Skill development program on Simple Electronic Circuits and their Applications

- Conducted Two day workshop for III sem students on **PCB Design and Testing** on 24th and 25th March 2022.



Workshop for III sem students on PCB Design and Testing

- Conducted one week FDP on **Embarking on Open Source Software in an Engineering & Research Journey** in association with FOSS group, VTU, Belagavi from 19th to 24th April 2022. **Dr. G S Sunitha Prof & HOD.**



FDP on Embarking on Open Source Software in an Engineering & Research Journey

- Mr. Honnappa M, alumni, 2015 **Deputy Superintendent of Police in CISF** at Ministry of Home Affairs, Government of India, alumni of E&CE addressed VI sem students on **Awareness towards UPSC and other Government opportunities for Engineering graduates** on 11th May 2022.



Awareness towards UPSC and other Government opportunities for Engineering graduates

- To get practical exposure about technology implementation, department had organized

Industrial visit to Tessolve Semiconductors Pvt. Ltd., A Venture of Hero Electronix, Bangalore on 11th June 2022. A team of 30 students and 3 faculty visited.



Visit to Tessolve Semiconductor Pvt. Ltd., Bengaluru

- Department organized an EC fest eUtsav on 14th and 15th June 2022 in association with ISTE Students Chapter, BIET Davangere and IETE Students Forum.
- **PAPYRUS 2k22**- State level Technical Paper Presentation and State level Project Exhibition **COGNITION** for UG students was organized under EC Forum in association with ISTE Students chapter & IETE Students on 27th June 2022. Under the Guidance of Dr. G S Sunitha, Prof & HOD, the event was coordinated by Mrs. Bhagya ShanthaKumar. The judges were Mrs. Savithri G R, Asst. Prof, E&CE, BIET and Mrs. Jyothi G C, Asst. Prof, IS&E, BIET.



PAPYRUS 2k22

Gnanavrudhi Lecture Series

- An overview on **PCB Design** using **Eagle Software** was conducted for department faculty by Mr. Lingaraj on 22nd February 2022.



PCB Design using Eagle Software

- Hands on session on **PRAYOGeeK Board** was Conducted by Mr. Ranjith Patil N on 5th March 2022.



Hands on session on PRAYOGeeK Board

- Mrs. Savithri G. R. conducted a hands - on session on **Introduction to Cadence tool** on 17th June 2022.



Introduction to Cadence tool

STUDENT ACHIEVEMENTS AND ACTIVITIES

- Ms. Sanmathi Sathbai and Ms. SMounika of V sem have participated in **PCB Design** organized by JIT Davangere on 15th and 16th January 2022.
- Mr. Rishikethu Chand of VI sem has qualified NPTEL course on **Programming, Data Structures and Algorithms using Python**.

- Ms. Rajeshwari and Ms. Sanjana of VII sem have participated in **Ikebana** event organized on the eve of Women's day celebration by CSE, BIET, Davangere on 7th March 2022.
- A stall was set up at **Krushi Mela-2022** in Davangere by III sem students under the guidance of Mr. Ganesh K to showcase agriculture project titled **Animal Intrusion Detection and Alerting System for Farm Protection**.



Demonstration of Project at Krushi Mela-2022

- Students of IV and VI semester participated in demonstration of mini projects as part of **Cognition 2022**.



Cognition 2022

- Mr. Rishikethu Chand, Shrilaxmi P Shettar and Bhumika N from E&CE and two from CS&E and one from IS&E team is selected to **Smart India Hackathon - SIH 2022**.
- Mr. Rishikethu Chand has submitted proposal for **Smart City Mission** titled **Need for Better Traffic Management** on 29th June 2022.
- Throw Ball Tournament organized by E&CE department.
 - Winner- E&CE Dept

- Runner Up - E&CE Dept



- NB Cup cricket tournament organized by E&CE department.
 - Winner – IS&E Dept
 - Runner up - E&CE Dept
- Students achievements in Davana events organized from 23rd, 24th and 25th June 2022
 - 1st Place in Ramp walk

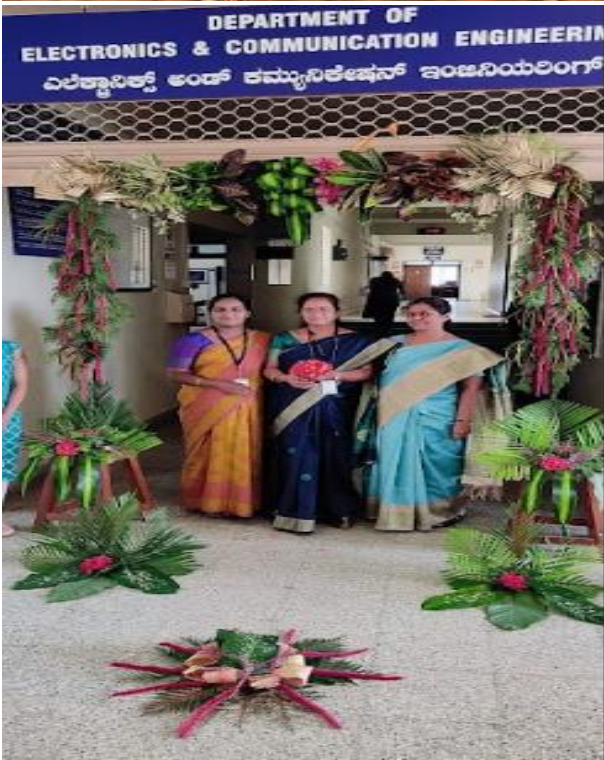


- 2nd place in Photography (Jhansi PM and Piyush H D)



2nd Place in Photography, Photo of Shiv Mandir, BIET Campus

- 2nd place in Arch Making and Photo Corner



Arch Making



Photo Corner

PLACEMENT ACTIVITIES

- Campus Recruitment of 2020-21 batch Students

| Sl. No. | Name of the company | No. of students Placed |
|--------------|-----------------------|------------------------|
| 1 | inube | 01 |
| 2 | Ernst & Young | 18 |
| 3 | Schneider Electric | 01 |
| 4 | Anora Semiconductors | 03 |
| 5 | Wipro Elite | 09 |
| 6 | Cleo Software | 05 |
| 7 | Work Force software | 01 |
| 8 | Dish Network | 02 |
| 9 | Q SPIDERS | 08 |
| 10 | PENTAGON SPACE | 03 |
| 11 | Brigosha Technologies | 04 |
| Total | | 55 |

FACULTY ACHIEVEMENTS AND ACTIVITIES

- Mr. Ganesh K was resource person for five days Workshop on **Digital Literacy for Librarians of Grampanchayat of Gadag District** organized by Karnataka State Rural Development and Panchyat Raj University' Gadag from 21-02-2022 to 25-02-2022.
- Dr. G H Leela and Dr. Nirmala S O has qualified NPTEL course on **Effective Teaching in Engineering Practices** during Jan -Feb 2022.
- Mr. Ganesh K has published an article in Janathavani Newspaper about **Solid Waste Management and Conversion into Fertilizers** on 17th March 2022.



- Mrs. Savithri G. R and Dr. G. S. Sunitha presented a paper **Design of Four Port Router for Network on Chip** in International Conference on Engineering Innovation organized by JIT, Davanagere on 03rd June 2022 is awarded with **Best Paper Award**.
- Mr. Kantaraj S. P., Dr. G. S. Sunitha, Dr. G. H. Leela and Dr. Nirmala S. O. published a paper **Design of Decimation Filter Structure for Wireless LAN Application** in International Journal of Electronics and Communication System, Vol 2, Issue 1.
- Mr. Ganesh K has attended **Data Science: Machine Learning** organized by EDX-Harvard Data science Professional Certificate Program from 15th April to 10th June 2022.
- Dr. G S Sunitha, Dr. Jayadevappa B M, Dr G H Leela, Dr. Nirmala S O, Mrs. Radhika Priya Y R, Mr. Ranjith Patil N and Mrs. Vanihree H V have attended a talk on **Innovate for India** organized by IS&E BIET Davangere in association with NAIN on 20th May 2022.

RESEARCHACTIVITIES

- Dr. K M Prakash is awarded with Ph.D.
- Mr. Kiran Kumar G H completed the Ph.D. final defence on 17th June 2022.

WORKSHOPS/FDP ATTENDED

- Dr. Nirmala S O, Mrs. Banumathi K L and Mrs. Sucharitha S D have attended **Awareness program on Intellectual Property Rights (IPR)** organized by IQAC Cell, BIET, Davangere on 28th January 2022.
- Dr. Avinash K G and Mr. Kiran Kumar G H have attended AICTE sponsored FDP on **Design Thinking** organized by VVCE, Mysore from 7th to 12th March 2022.
- All faculty members of E&CE department have attended 6 days FDP on **Embarking on Open Source Software in an Engineering and Research Journey**, organized by E&CE Department, BIET Davangere in association with VTU FOSS group, from 19th to 24th April 2022.
- Mr. Ganesh K has attended IEEE Conference Organizers Education Workshop **COEW 2022** organized by IEEE Bengaluru section, IEEE Mysuru Subsection, IEEE Mangaluru Subsection and IEEE North Karnataka Subsection on 10th April 2022.
- Mr. Ali I K, Mr. Mahendrachari, Mrs. Suman B S, Mr. Yogesh K O and Mrs. Vanishree H V have attended and obtained **UHV-1 Course Certification**.
- Mr. Kantharaj S P and Mrs. Sucharitha S D have completed **5 days Faculty Enrichment Program** conducted by **Infosys Springboard on AI** from 6th to 10th June 2022.

ARTICLE

How much oxygen comes from the ocean?
At least **half** of Earth's oxygen comes from the **ocean**.



The surface layer of the ocean is teeming with photosynthetic plankton. Though they're invisible to the naked eye, they produce more oxygen than the largest redwoods.

Scientists estimate that 50-80% of the oxygen production on Earth comes from the ocean. The majority of this production is from oceanic plankton — drifting plants, algae, and some bacteria that can photosynthesize. One particular species, *Prochlorococcus*, is the smallest photosynthetic organism on Earth. But this little bacteria produces up to 20% of the oxygen in our entire biosphere. That's a higher percentage than all of the tropical rainforests on land combined.

Calculating the exact percentage of oxygen produced in the ocean is difficult because the amounts are constantly changing. Scientists can use satellite imagery to track photosynthesizing plankton and estimate the amount of photosynthesis occurring in the ocean, but satellite imagery cannot tell the whole story. The amount of plankton changes seasonally and in response to changes in the water's nutrient load, temperature, and other factors. Studies have shown that the amount of oxygen in specific locations varies with time of day and with the tides.

It's important to remember that although the ocean produces at least 50% of the oxygen on Earth, roughly the same amount is consumed by marine life. Like animals on land, marine animals use oxygen to breathe, and both plants and animals use oxygen for cellular respiration. Oxygen is also consumed when dead plants and animals decay in the ocean.

This is particularly problematic when algal blooms die and the decomposition process uses oxygen faster than it can be replenished. This can create areas of extremely low oxygen concentrations, or hypoxia. These areas are often called dead zones, because the oxygen levels are too low to support most marine life. NOAA's National Centers for Coastal Ocean Science conducts extensive research and forecasting on algal blooms and hypoxia to lessen the harm done to the ocean ecosystem and human environment.

What are plankton?

Plankton are **marine drifters organisms** carried along by **tides and currents**.

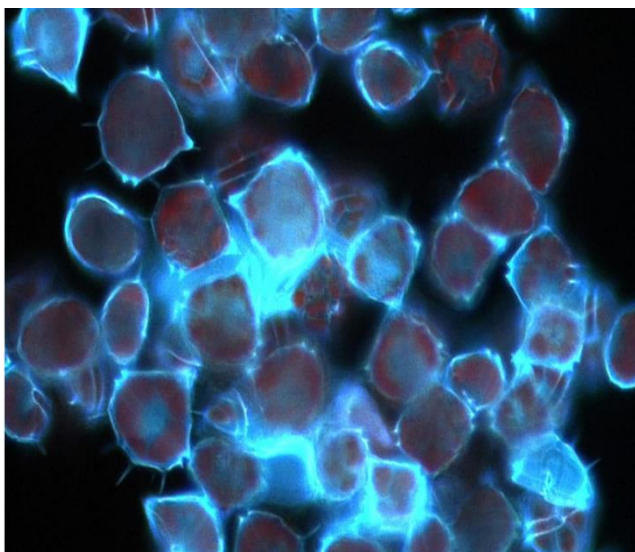


Phytoplankton blooms in the Barents Sea, shown in natural color from NASA's Aqua satellite on July 10, 2014. The solid white area in the top right corner is cloud cover. Credit: NASA's Earth Observatory.

The word “plankton” comes from the Greek for “drifter” or “wanderer.” An organism is considered plankton if it is carried by tides and currents, and cannot swim well enough to move

against these forces. Some plankton drift this way for their entire life cycle. Others are only classified as plankton when they are young, but they eventually grow large enough to swim against the currents. Plankton are usually microscopic, often less than one inch in length, but they also include larger species like some crustaceans and jellyfish.

Scientists classify plankton in several ways, including by size, type, and how long they spend drifting. But the most basic categories divide plankton into two groups: phytoplankton (plants) and zooplankton (animals).



A microscopy image of *Protoperidinium quinquecorne* enhanced with a fluorescent dye. The chlorophyll pigment is shown in red. This is one example of thousands of types of phytoplankton.

Phytoplankton are microscopic plants, but they play a huge role in the marine food web. Like plants on land, phytoplankton perform photosynthesis to convert the sun's rays into energy to support them, and they take in carbon dioxide and produce oxygen. Because they need the sun's energy, phytoplankton are found near the water's surface.



A copepod (shown here) is a type of zooplankton, a planktonic crustacean distantly related to shrimp and crabs. Copepods are one of the most common and easily recognized types of zooplankton, found in almost every ocean, sea, and freshwater habitat, even in underground caverns. Image credit: NASA

Plankton are incredibly important to the ocean ecosystem, and very sensitive to changes in their environment, including in the temperature, salinity, pH level, and nutrient concentration of the water. When there are too many of certain nutrients in the water, for instance, harmful algal blooms like red tides are the result. Because many zooplankton species eat phytoplankton, shifts in timing or abundance of phytoplankton can quickly affect zooplankton populations, which then affects species along the food chain. Researchers are studying how climate change affects plankton, from the timing of population changes to the hardening of copepod shells, and how those effects ripple through ecosystems.

LITERARY CONTRIBUTION

ಎಡವಿದರೇನುನೂರುಭಾರಿ
ಮತ್ತೇಳುವುದರಲೇನಿನ್ನಗೆಲುವು
ಸೋತರೇನಂತೆಸಾವಿರಭಾರಿ
ಸಾವಿಲ್ಲಪ್ರಯತ್ನಗಳಿಗೆ !!!!

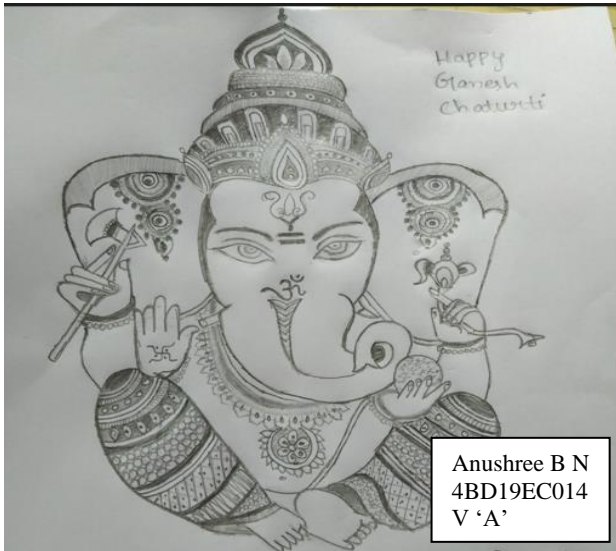
ಕಷ್ಟಗಳೆದುರುಕಲ್ಲಾಗು,
ನೋವುಗಳಿಗೆನಗುವಾಗು
ಮುನ್ನುಗ್ಗುನಿನ್ನಗುರಿಯ
ದಾರಿಯಲಿ,
ಸಾಧಿಸುವೆನೆಂಬನಂಬಿಕೆಯಲಿ...

ಕುಗ್ಗದಿರಲಿಆತ್ಮಬಲ
ಬದುಕಿನಬವಣೆಗಳಿಗೆ....
ಮೆಟ್ಟಿಲಾಗಿ ಸಿಕೊಳ್ಳಬದುಕ
ತೊಡರುಗಳ, ನಿನ್ನ
ಯಶಸ್ಸಿನಶಿಖರಕೆ.....!!!!
ಸುಚರಿತ S D
ಸಹಾಯಕಪ್ರಾಧ್ಯಾಪಕಿ
E & CE ವಿಭಾಗ

PAINTINGS



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MOBILE PHOTOGRAPHY



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By Jhansi P M

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ALUMNI CORNER



Nagaraj G K
Techno Program Manager
Tata Communications Ltd, Bengaluru

About

A dynamic and passionate professional, with 18 years of diverse global IT experience. Proficient in Agile projects practices for more than 5 years. Delivered series of Agile Awareness Class room and Virtual sessions. Proven expertise in Project management, product development life cycle, client presentation for new bids. Experience in managing multi- skilled teams.

Education

Bachelor of Engineering: Electronics and Communication, 2010 – 2014
BIET Davangere

Employment Summary

| Sl. No | Name of the organization | Designation |
|--------|-----------------------------------|--------------------------------|
| 1 | Tata Consultancy Services | Consultant/ Project manager |
| 2 | Celstream Technologies | Technical Manager |
| 3 | Wipro Technologies | Systems Manager |
| 4 | C.G Smith Software Ltd. | Member of Technical Staff |
| 5 | Process Care Systems Private Ltd. | R & D Engineer |
| 6 | Bharath Electronics Ltd. | Graduate Trainee |