EC 🎙 VOICE

A QUARTERLY NEWSLETTER OF ELECTRONICS & COMMUNICATION ENGG.

Vol.4 Issue-4 April – June 2021

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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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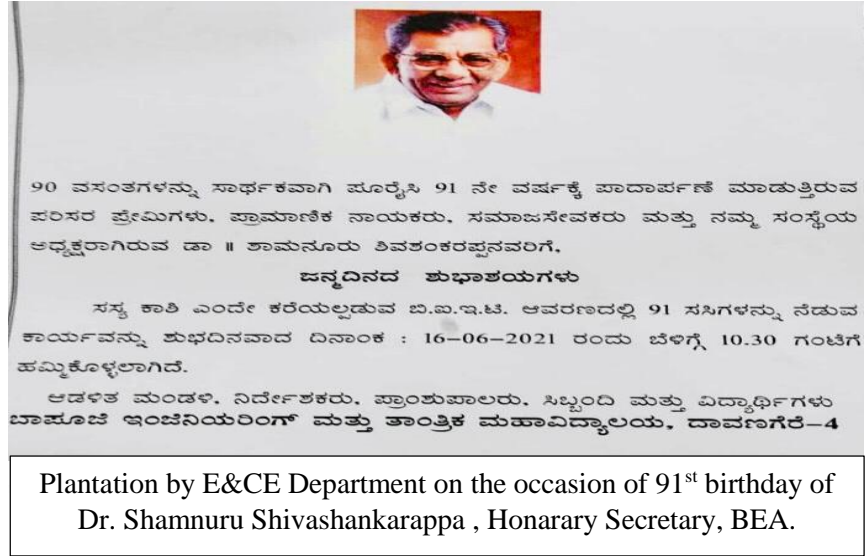   Asst. Prof.
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90 ವಸಂತಗಳನ್ನು ಸಾರ್ಥಕವಾಗಿ ಪೂರೈಸಿ 91 ನೇ ವರ್ಷಕ್ಕೆ ಪಾದಾರ್ಪಣೆ ಮಾಡುತ್ತಿರುವ ಪರಿಸರ ಪ್ರೇಮಿಗಳು, ಪ್ರಾಮಾಣಿಕ ನಾಯಕರು, ಸಮಾಜಸೇವಕರು ಮತ್ತು ನಮ್ಮ ಸಂಸ್ಥೆಯ ಅಧ್ಯಕ್ಷರಾಗಿರುವ ಡಾ || ಶಾಮನೂರು ಶಿವಶಂಕರಪ್ಪನವರಿಗೆ,

ಜನ್ಮದಿನದ ಶುಭಾಶಯಗಳು

ಸಸ್ಯ ಕಾಶಿ ಎಂದೇ ಕರೆಯಲ್ಪಡುವ ಬಿ.ಐ.ಇ.ಟಿ. ಆವರಣದಲ್ಲಿ 91 ಸಸಿಗಳನ್ನು ನೆಡುವ ಕಾರ್ಯವನ್ನು ಶುಭದಿನವಾದ ದಿನಾಂಕ : 16–06–2021 ರಂದು ಬೆಳಿಗ್ಗೆ 10.30 ಗಂಟೆಗೆ ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ.

ಆಡಳಿತ ಮಂಡಳಿ, ನಿರ್ದೇಶಕರು, ಪ್ರಾಂಶುಪಾಲರು, ಸಿಬ್ಬಂದಿ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳು
ಬಾಪೂಜಿ ಇಂಜಿನಿಯರಿಂಗ್ ಮತ್ತು ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ, ದಾವಣಗೆರೆ–4

Plantation by E&CE Department on the occasion of 91st birthday of Dr. Shamnuru Shivashankarappa , Honarary Secretary, BEA.

Inside the Issue

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

Quote Corner

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.

National Education Policy 2020

The New Education Policy (NEP) 2020 has given increased focus on the use and integration of technology for professional education.

The NEP 2020 lays down the urgent need to eliminate the digital divide through concerted efforts and empower individuals with skills such as big data, machine learning, and artificial intelligence, through online/digital learning. By providing high-quality education to all, the policy provides guidelines to make India a global knowledge superpower.

The New Education Policy (NEP) 2020 has given increased focus on the use and integration of technology for professional education. The policy stresses the Digital India Campaign that is helping to transform the entire nation into a digitally empowered society and knowledge economy. In such an economy, education and technology will play a symbiotic role to improve existing educational processes and outcomes.

Boost to EdTech entrepreneurs and pro-digital teachers

Technology is expected to impact education in multiple ways with the support of tech-savvy teachers and entrepreneurs including student entrepreneurs who are innovating smart methods to integrate technology into education curriculum at all levels and develop professionals who can compete at an international landscape. New technologies involving artificial intelligence, machine learning, block chains, smart boards, handheld computing devices, adaptive computer testing for student development, and other forms of educational software and hardware will not just change what students learn in the classroom but how they learn, and thus these areas and beyond will require extensive research both on the technological as well as educational fronts.

From HOD's Desk

I am happy that we are bringing out the last issue of volume 4.

I would like to share that faculty of the Department along with the other faculty of college happily celebrated the 91st birthday of our Honarary Secretary, Dr. Shamnur Shivashankarappa by planting saplings.

Under the Gnana Vrudhi lecture series, faculty delivered talks on recent topics.

Online paper presentation Papyrus – 2K21 was successfully organized with active participation of the students.

Also I would like to share that webinars were conducted for the VI sem students to create awareness and guide students to select their Internship domain.

Integrating technology with professional education

With the quickly changing employment landscape and global ecosystem, it is becoming increasingly critical that students not only learn, but more importantly learn how to learn. Education thus, must move towards less content and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary and how to innovate, adapt, and absorb new material in novel and changing fields. By encouraging teachers and entrepreneurs who are working to bridge the gap between the current state of learning outcomes and what is required by undertaking major reforms, the NEP 2020 has developed a roadmap to bring Indian education at par with international standards. The speed at which the reforms are implemented will prove how soon we reach our objective of being considered at an equal footing with those of our global peers.

DEPARTMENTAL ACTIVITIES

Gnana Vrudhi- Lecture Series

Faculty	Topic	Date
Mrs. Suman B S	Machine Learning	03-04-2021
Mrs. Poornima G N	Block Chain Technology	10-04-2021
Mr. Lingaraj	System Verilog	05-06-2021 (Online)

Mrs. Suman B S

Mrs. Poornima G N

- Webinar was organized on **Skills and Opportunities in VLSI** on 22nd May for VIII sem students. Session was by Shri Vaibhav Rajpurohit, Senior Lead Engineer, Qualcomm.

Papyrus-2K21

PAPYRUS 2K21 – Online State level Technical Paper Presentation for UG was organized under EC Forum in association with ISTE Students' chapter & IETE Students' Forum on 10th June 2021.

The student coordinators were Aditya R Bangur, Shreeraksha R K, Chandankumar SR, S.K Shashank, Rajeshwari S, Udaykumar D, Sakshi Ghorpade, Nandini V, Deepa KM, Nikhitha GV, Nikshep U S, Sanmati S Satabhai and Sindhu BB.

Responding to the invitation sent to various engineering colleges across Karnataka, 52 teams participated.

Papyrus Participants

Three parallel sessions were held for the Paper Presentation. Two papers from each sessions were awarded first and second place. A cash prize of ₹800 and ₹500 was given to first and second place along with merit certificate in the valedictory function.

Venue	Judges	Paper Title	Presenters
1	Prof. K. Ramesh, Asst. Prof E&CE, UBDT, Davangere Prof. Banumathi K L, Asst. Prof E&CE, BIET.	Voice Recognition Based Smart Hospital Bed	**Mr. C S Saikiran & Ms. Aditi S Hiremath, BIET, Davangere**
		Facial Emotion Recognition using CNN	Mr. Raghvendra A & Ms. Nemitha N G, GMIT, Davangere
2	Dr. Chetana Prakash, Professor CSE, BIET Prof. Radhika Priya Y R, Asst. Prof E&CE BIET	Cloud Based Smart Healthcare Management System using Blue Eyes Technology	Ms. Priya K V from JNNCE, Shivamogga
		Paper Battery	**Ms. Ruthushree H & Ms. Pooja R , BIET, Davangere**
3	Dr. Santosh Herur, Asst. Prof. E&CE, GMIT, Davangere Prof. Nirmala G, Asst. Prof E&CE BIET.	CSoA for Agriculture through IoT and Big Data	**Mr. Chinmayraj J N , BIET, Davangere**
		Smart Energy Efficient Home Automation System Using IOT	Ms. Ashfa M Nadaf & Ms. Nagashree K Madival , GMIT, Davangere

Internship Awareness Webinars

Internship awareness webinars were arranged in the department for the VI semester students to help them select their domain for Internship.

Sl. No	Date	Details	Resource Person
1	7th June 2021	Industrial Training /Internship: Launchpad for Productive carrier	Mr. Damodara M Business Head Entuple Technologies Bangalore
2	17th June 2021	Introduction to Machine Learning and Deep Learning	Mr. Shreyas CEO, Rove Labs Pvt LTD Bangalore
3	26th June 2021	Exposure to Industy 4.0	Mr. Vasuki N Teragundi CEO, Herin Electronics Mysuru
4	27th June 2021	PCS-BIET Internship Webinar ECE-2021	Mr. Binit,Operations Manager, Mr. Nabi, CTO,PCS Tech, Bengaluru
5	28th June 2021	In - Demand Technologies -Job Opportunities and Skill Enhancement	Mr. Mallesh V S, Technical Team Manager, Abeyaantrix softlab opc Pvt. Ltd., Davangere

Others

- Dr. G S Sunitha delivered a talk about Scope of Electronics & Communication and Job Opportunities in Engineering in the Student Induction Program(SIP)-2021, Phase II on 09th June 2021.

- Dr. G S Sunitha attended VTU Board of Examinations(BOE) meeting on 21 June 2021.

STUDENT ACHIEVEMENTS AND ACTIVITIES

- Students of VI sem attended BootCamp organized by BIET in association with Startup Karnataka and NAIN on 5th June 2021.

Placement Activities

- Pre Final Year Students (11) attended Online Training Program arranged by Coaching for Recruitment & Empowerment of Action (CREA) from 13th to 19th May 2021.

- Campus Recruitment of 2020-21 batch Students

Sl.No.	Name of the company	No. of students Placed
1	TCS	08
2	iNube	01
3	SLK Technologies	06
4	Technologics	01
5	Infosys	03
6	Insemi Technologies	07
7	HCL Technologies	07
8	Technovert	02
9	Accenture	03
10	Face Prep	02
11	Gigsky	01
12	Global Edge	01
13	Wipro	01
14	Pi Square Technologies	03
15	KPIT	01
16	KPMG Pvt. Ltd.	06
17	Herin Electronics	03
18	Cinif Technologies	01
19	Pentagon Technologies	01
20	Mindtree	01
Total		59

Co-Curricular Activities

- .Shreeraksha R K has successfully completed participating in **The Guinness World Record Most users to take on online computer programming lesson** in 24 hours on 24th April 6 PM to 25th April 2021 6 PM.

- Nandeesh YR secured 2nd place for the earliest completion of the **Application Security - Vulnerability Assessment course** in the Davangere district conducted in March-April 2020-21

- Shreeraksha R K was awarded the certificate of achievement for the successful completion of **Game Development using PyGame** on 13th May 2021.

- Nandeesh YR completed Cisco Networking Academy® **Introduction to Cybersecurity course** on 18 May 2021.

- Nandeesh YR has successfully completed the course on **Python Facts for C++/Java Developers** of duration 8 weeks.

FACULTY ACHIEVEMENTS AND ACTIVITIES

Research Activities

- Dr. B M Jayadevappa and Dr. Avinash K G presented on Project Proposal titled **Design and Development of prosthetic foot** submitted to DST before Program advisory & Monitoring committee on 21st June 2021.

Workshops/FDP Attended

- Prof. Suman B S attended FDP on **Machine Learning Algorithms using Python** on 29th March to 02nd April, 2021 organized by Indian Institute For Production Management, Kansbahal, Odisha.

- Prof. Poornima G N attended Webinar on **Signal Processing Opportunities and Trends 2020** on 10th April 2021 organized by Department of electronics and Communication Engineering, SDM college of Engineering, Dharwad

- Dr. G S Sunitha attended a webinar on **RF Engineering and Its Application** on 16th April 2021 organized by IEEE KSSEM Student Branch in association with IEEE Bangalore.

- Prof. Savithri G R, Prof. Suma K G, Prof. Bhagya S attended **Xilinx Webinar on Pynq - Python productivity for ZYNQ 7000 – SoC** on 23rd April 2021 organized by CoreEL Technologies and Xilinx.

- Prof. Suman B S attended webinar **Improvement in Engineering Educationon** 23rd April 2021 organized by CoreEL Technologies and Xilinx.

- Prof. Nirmala G attended National Webinar on **Women Empowerment under Mission Shakti-2021** on 24th April 2021 organized by SPIU & BIET Jhansi, under TEQUIP Mandate of Equity Action Plan.

- Dr. B M Jayadevappa, Dr. Leela G H, Dr. Nirmala S O, Prof. Banumathi K L, Prof. Bhagya S, Prof. Nirmala G, Prof. Suman B S attended online AICTE-ISTE approved Orientation/ Refresher Programme on **Accreditation: An Accelerator for Quality Improvement in Engineering Education** from 22-28th April 2021 organized by S.D.M. College of Engineering and Technology, Dharwad, Karnataka.

- Dr. B M Jayadevappa attended Application of Artificial Intelligence & Machine Learning from 10th to 14th May 2021 organized by Reva University, Bengaluru

- Dr. G S Sunitha , Prof. Radhika Priya Y R, Prof. Nirmala G, Prof. Suman B S attended Online AICTE- ISTE approved Orientation / Refresher Programme on **FUTURE WIRELESS COMMUNICATION : Standards & Technologies** from 24th to 29th May 2021, organized by K.S. Institute of Technology, Bangalore.

- Prof. K M Prakash completed ATAL FDP on **IOT** Organized by Jammu University from 1st June to 5th June 2021.

- Prof. Nirmala G attended Online webinar on **Blockchain & Cryopto Currency - An overview of trending technology** on 05th June 2021 organized by Department of Electronics and Communication Engineering, Brindavan College of Engineering, Bengaluru.

- Dr. Nirmala S O attended Online AICTE Training And Learning (ATAL) Academy Online Elementary FDP on **Formal Verification of Digital Designs** from 7-11th June 2021, organized by PES UNIVERSITY.

- Prof. Bhagya Shanthakumar attended One Week Short Term Training Program(AICTE sponsored) on **Next Generation Wireless Technologies: 5G and beyond** from 7th June 2021 to 12th June 2021 organized by Indo Global College Of Engineering, Abhipur.

- Prof. Vanishree H V attended FDP on **Research Trends in Information Technology** from 10th to 12th June 2021 organized by Department of Electronics & Communication Engineering, Basaveshwar Engineering College, Bagalkot Karnataka

- Dr. B M Jayadevappa attended **Augumented Reality and Virtual Reality** from 21st to 25th June 2021 organized by AISSMS PUNE.

- Dr. Avinash K G completed One week Faculty Development Program on **Smart Antennas & its role in 6G Communication** organized by Dept. of E&CE,Chandigarh Engineering College, Mohali from 22nd to 26th June 2021.

- Prof. Bhagya Shanthakumar attended Xilinx webinar on Pynq - Python productivity for Zynq SoC and Zynq Ultrascale+ MPSoC on 09th July 2021 organized by CoreEL Technologies and Xilinx.

- Prof. Kantharaj S P attended Effective utilization of VTU Consortium E-Resources using RRCE organized by VTU on 2nd July 2021.

ARTICLE

What is Industry 4.0—the Industrial Internet of Things (IIoT)?

ndustry 4.0 refers to a new phase in the Industrial Revolution that focuses heavily on interconnectivity, automation, machine learning, and real-time data. Industry 4.0, also sometimes referred to as IIoT or smart manufacturing, marries physical production and operations with smart digital technology, machine learning, and big data to create a more holistic and better connected ecosystem for companies that focus on manufacturing and **supply chain management**. While every company and organization operating today is different, they all face a common challenge— the need for connectedness and access to real-time insights across processes, partners, products, and people.

That's where Industry 4.0 comes into play.

Industry 4.0 isn't just about investing in new technology and tools to improve manufacturing efficiency—it's about revolutionizing the way your entire business operates and grows.

Evolution of Industry from 1.0 to 4.0

Before digging too much deeper into the what, why, and how of Industry 4.0, it's beneficial to first understand how exactly manufacturing has evolved since the 1800s. There are four distinct industrial revolutions that the world either has experienced or continues to experience today.

The First Industrial Revolution

The first industrial revolution happened between the late 1700s and early 1800s. During this period of time, manufacturing evolved from focusing on manual labor performed by people and aided by work animals to a more optimized form of labor performed by people through the use of water and steam-powered engines and other types of machine tools.

The Second Industrial Revolution

In the early part of the 20th century, the world entered a second industrial revolution with the introduction of steel and use of electricity in factories. The introduction of electricity enabled manufacturers to increase efficiency and helped make factory machinery more mobile. It was during this phase that mass production concepts like the assembly line were introduced as

The Third Industrial Revolution

Starting in the late 1950s, a third industrial revolution slowly began to emerge, as manufacturers began incorporating more a way to boost productivity. electronic—and eventually computer—technology into their factories. During this period, manufacturers began experiencing a shift that put less emphasis on analog and mechanical technology and more on digital technology and automation software.

The Fourth Industrial Revolution, or Industry 4.0

In the past few decades, a fourth industrial revolution has emerged, known as Industry 4.0. Industry 4.0 takes the emphasis on digital technology from recent decades to a whole new level with the help of interconnectivity through the Internet of Things (IoT), access to real-time data, and the introduction of cyber- physical systems. Industry 4.0 offers a more comprehensive, interlinked, and holistic approach to manufacturing. It connects physical with digital, and allows for better collaboration and access across departments, partners, vendors, product, and people. Industry 4.0 empowers business owners to better control and understand every aspect of their operation, and allows them to leverage instant data to boost productivity, improve processes, and drive growth.

Basic IIoT Concepts and Glossary of Terms

There are hundreds of concepts and terms that relate to IIoT and Industry 4.0, but here are 12 foundational words and phrases to know before you decide whether you want to invest in Industry 4.0 solutions for your business:

- **Enterprise Resource Planning (ERP):** Business process management tools that can be used to manage information across an organization.

- **IoT:** IoT stands for Internet of Things, a concept that refers to connections between physical objects like sensors or machines and the Internet.

- **IIoT:** IIoT stands for the Industrial Internet of Things, a concept that refers to the connections between people, data, and machines as they relate to manufacturing.

- **Big data:** Big data refers to large sets of structured or unstructured data that can be compiled, stored, organized, and analyzed to reveal patterns, trends, associations, and opportunities.

- **Artificial intelligence (AI):** Artificial intelligence is a concept that refers to a computer's ability to perform tasks and make decisions that would historically require some level of human intelligence.

- **M2M:** This stands for machine-to-machine, and refers to the communication that happens between two separate machines through wireless or wired networks.

- **Digitization:** Digitization refers to the process of collecting and converting different types of information into a digital format.

- **Smart factory:** A smart factory is one that invests in and leverages Industry 4.0 technology, solutions, and approaches.

- **Machine learning:** Machine learning refers to the ability that computers have to learn and improve on their own through artificial intelligence—without being explicitly told or programmed to do so.

- **Cloud computing:** Cloud computing refers to the practice of using interconnected remote servers hosted on the Internet to store, manage, and process information.

- **Real-time data processing:** Real-time data processing refers to the abilities of computer systems and machines to continuously and automatically process data and provide real-time or near-time outputs and insights.

- **Ecosystem:** An ecosystem, in terms of manufacturing, refers to the potential connectedness of your entire operation—inventory and planning, financials, customer relationships, supply chain management, and manufacturing execution.

- **Cyber-physical systems (CPS):** yber-physical systems, also sometimes known as cyber manufacturing, refers to an Industry 4.0-enabled manufacturing environment that offers real-time data collection, analysis, and transparency across every aspect of a manufacturing operation.

Source: https://www.epicor.com/en-in/resource-center/articles/what-is-industry-4-0/
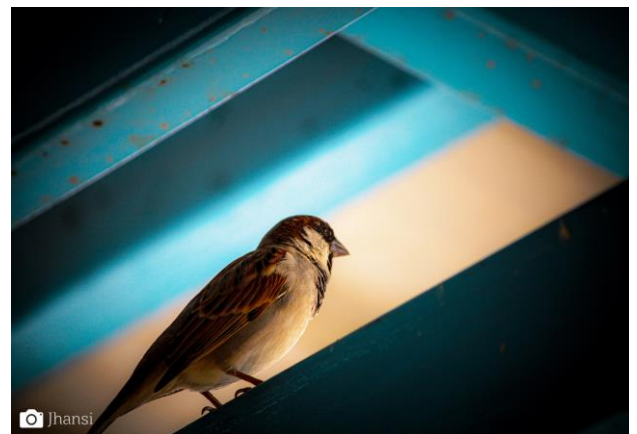
LITERARY CONTRIBUTION

ಕಾವಲಾದೆ ತಾಯಿಗೆ ಜನಿಸುತಲೆ,
ತಾಯಿಗಾಗಿ, ತಂದೆಯನ್ನೆ
ಎದುರಿಸಿದೆ....
ಭಯವಿಲ್ಲ ನೀ ಇರುವಲ್ಲಿ,
ಸೊತವರಿಲ್ಲ ನಿನ್ನ ನಂಬಿ..
ಹೇ ಗಜವದನ ,
ಸಿದ್ದಿ- ಬುದ್ದಿಗೇ ನಾಯಕ ನೀನೂ,
ಮೋದಕ ಪ್ರಿಯ ನೀನು,
ಆದಿ ಪೂಜಿಸಲು, ವಿಘ್ನ
ನಿವಾರಿಸುವೆ ...
ಗರಿಕೆಯಲ್ಲೇ ಭಕ್ತಿ ಕಾಣುವೆ ....
ಪರಿಹರಿಸು ಪಾಪವ,
ರಕ್ಷಿಸು ನಿನ್ನವರ , ಹೇ
ಗಣಾಧರ...ಹರಸಿ ಹಾರ್ಯೆಸು
ನಿನ್ನ ನಂಬಿದ ಭಕ್ತರ.....

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ಶ್ರೀಮತಿ ಸುಚರಿತ S D
Asst. Professor

</div>

PAINTINGS

Mobile Photography

Alumni Corner

Vinodkumar Iyer
CEO at iNube Software Solutions Pvt Limited

About
Experienced Chief Executive Officer with a demonstrated history of working in the information technology and services industry. Skilled in Enterprise Software, Business Development, Enterprise Architecture, Strategy, and Software Project Management. Strong business development professional with a Bachelor of Engineering focused in Electronics and Communications from University of Mysore.

Experience

- iNube Software Solutions Pvt Limited : CEO, September 2011 to present.

- *Hewlett-Packard:* 11 yrs 9 mos

- Oracle Corporation, USA: Senior Member Technical Staff, 1998 – 2000

- AT&T Corporation : Consultant , May 1997 – Apr 1998

- Hewlett-Packard ISO Ltd : Consultant Dec 1995 – Apr 1997

Education

-

  Stanford University Graduate School of Education
  Stanford LEAD: Corporate Innovation Certificate, 2019 – 2020

-

  Harvard Business School
  Executive Program from Harvard Business School on Aligning Strategy, Strategy, 2014

- **Bapuji Institute of Engineering and Technology, Davanagere**

  Bachelor of Engineering: Electronics and Communications , 1988 – 1992

- DVS Junior College, Shimoga
  PU College , 1986 – 1988