KARNATAK LAW SOCIETY'S

SHRI VASANTRAO POTDAR POLYTECHNIC

KLS CAMPUS, TILAKWADI, BELAGAVI – 590 006

(Recognized by Govt. of Karnataka & Approved by AICTE, New Delhi)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

NEWS LETTER 2020-21

Vision

The department of Electronics and Communication engineering shall stand as an excellent department, offering quality education in electronics and communication with a research focus, catering to the need of the public and being in tune with the advancing technological revolution.

Mission

M1: To train the students of Department of Electronics and Communication Engineering in technological areas.
M2: To establish centers of excellence pertaining to develop skills among the students.
M3: To facilitate the spirit of innovation & creativity in technological areas.

Message from Chairman

At VPP our quest for excellence continues through various initiatives that will help our students place themselves on a career path, that does justice to their capacities and motivation. I look forward for your suggestions and ideas for raising the bar.

-Shri. U.N.Kalkundrikar

Message from Principal

To impart quality education and bridge the industry-institution gap, VPP has established a Centre of Excellence which runs programmes to cater the needs of the students. Memorandum of understanding with the industries is established which helps the students in persuading internship programmes.To help students get admitted in reputed Engineering colleges, VPP conducts NATA and DCET classes for the students of final year. Your suggestions are most welcome.

-Ms. Shridevi S. Malaj

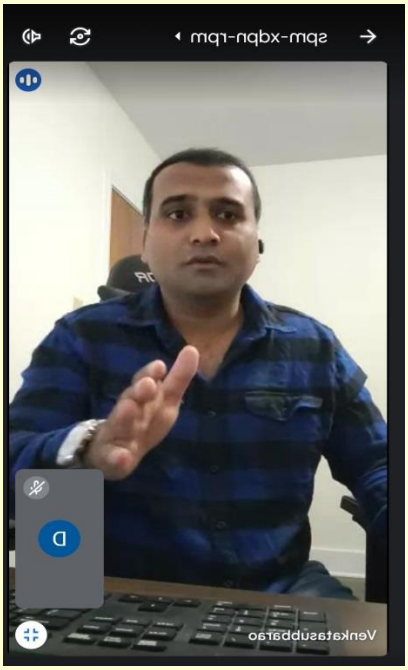
Editorial Board

Mrs. Neelam Sommannavar
Lecturer, Dept of EC
Mrs. Snehal Kadam
Instructor, Dept. of EC

BHAGYASHRI MOHARIRE
VI SEM EC Student
KANCHAN MANJUNATH SHINDE
VI SEM EC Student

EVENTS

- Organised Online webinar series by Alumni on "Career Guidance" for VI Semester students on the topic Day-I "Envision your career goals" by Venkatasubbarao Sutrave ,MTS Silicon Design Engineer at AMD on 26th June 2021.



Staff Achievements and Activities

- Mrs. Pooja Rao, HOD E&C, Mrs. Madhavi Kulkarni, Mrs. Amruta Devvangavi, & Mr. Santosh Kulkarni attended ATAL workshop during October and November 2020.
- Mrs. Pooja Rao attended NPTEL Examination on 19.12.2020.
- Mrs. K.S.Bharati, HOD E&C and Mrs. Pooja Rao, SGL completed assignment during Feb-April 2021 on topic "Accreditation for Diploma Engg. Programme 2020-21" under AICTE-NITTTR.
- K.S.Bharati, HOD E&C, completed assignment during Feb-April 2021 on topic "Computer Architecture" under Swayam.
- Mrs. Pooja Rao, SGL, completed assignment during Feb-April 2021 on topic "Digital Electronic Circuits" under Swayam.
- Mrs. Pooja Rao, SGL, completed proctored Exams and obtained "Elite" result under NPTEL online course on topic "Semiconductor Devices & Circuits" .
- Mrs. Pooja Rao, SGL, completed proctored Exams under AICTE-NITTTR online course on topic "Module 5 Technology Enabled Learning and Life Long Self Learning" from April 2020 to March 2021.
- Mrs. Pooja Rao, SGL, participated and 5 day online FDP on "Inculcating Universal Human values in Technical Education" organized by AICTE from 22.03.2021 to 26.03.2021.

Students Achievements

- Toppers for the Year 2020-21

- **First Year 2020-21**

Sl No	Name of the Students	Total	%	Photo	Rank
1	SMRITI SANJEEV MUTALIK	1157/1200	96.41%		1st Rank
2	VADIRAJ NARAYAN BETAGERI	1078/1200	89.83%		2nd Rank
3	SANJANA SANJAY VEER	1025/1200	85.6%		3rd Rank

- **Second Year 2020-21**

Sl No	Name of the Students	Total	%	Photo	Rank
1	KANCHAN MANJUNATH SHINDE	1296/1450	89.37%		1st Rank
2	RADHIKA RAMESH WAGUKAR	1243/1450	85.72%		2nd Rank
3	BHAGYASHRI MOHARIRE	1170/1450	80.68%		3rd Rank

- **Final Year 2020-21**

Sl No	Name of the Students	Total	%	Photo	Rank
1	**Miss. SNEHAL SUNDAR KANBARGI**	1264/1375	91.92%		1st Rank
2	**Mr. SIDDHANT ANGOLKAR**	1240/1375	90.81%		2nd Rank
3	**Mr. VIDHYAVANT D NESARKAR**	1191/1375	86.61%		3rd Rank

ARTICLE SECTION

Revolutionizing Healthcare: Artificial Intelligence in Robotic Surgery

Article by student Gayatri Machendra Shinde

Robotic surgery has witnessed remarkable advancements in recent years, thanks to the integration of artificial intelligence (AI) technologies. This synergy has transformed the landscape of healthcare by enhancing surgical precision, reducing recovery times, and improving patient outcomes. In this article, we will explore the role of AI in robotic surgery, its applications, benefits, and the future of this groundbreaking technology.

The AI and Robotic Surgery

In 2004, the United States' Defense Advanced Research Projects Agency (DARPA) dangled a $1 million prize for any group that could design an autonomous car that could drive itself through 142 miles of rough terrain from Barstow, California, to Primm, Nevada. Thirteen years later, the Department of Defense announced another award — not for a robot car this time, but for autonomous, robotic doctors.

Robotic surgery has become increasingly popular due to its minimally invasive nature, offering surgeons the advantage of improved precision and control during procedures. AI, on the other hand, has the capacity to process vast amounts of data, recognize patterns, and make real-time decisions, making it a perfect complement to robotic surgery systems.

AI in robotic surgery is primarily focused on three areas:

Surgical Planning: AI helps surgeons plan procedures more efficiently. By analyzing a patient's medical history and diagnostic data, AI can recommend the best surgical approach, minimizing the risk of complications.

Intraoperative Assistance: During surgery, AI can provide real-time assistance to the surgeon. This includes image analysis, 3D visualization, and the identification of critical structures. It can alert the surgeon to potential complications or deviations from the surgical plan.

Postoperative Care: After surgery, AI plays a role in monitoring patient recovery. It can predict postoperative complications and assist in the development of personalized recovery plans.

Applications of AI in Robotic Surgery:

Image Recognition: AI algorithms can identify and segment anatomical structures in real-time. This helps the surgeon precisely locate and manipulate tissues.

Surgical Assistance: AI can suggest optimal instrument trajectories and angles, reducing the risk of human error during surgery.

Predictive Analytics: AI can predict the likelihood of complications, such as bleeding or infections, during or after surgery. This allows surgeons to take preventative measures.

Robotic Instruments: Robotic surgical systems equipped with AI can perform tasks more efficiently and with greater precision, making them invaluable for complex surgeries.

Benefits of AI in Robotic Surgery:

Enhanced Precision: AI-driven robotic systems offer unparalleled precision, reducing the risk of errors during surgery.

Faster Recovery: Minimally invasive robotic surgeries result in shorter hospital stays and quicker recovery times for patients.

Reduced Human Error: AI can assist surgeons by providing real-time feedback and assistance, reducing the potential for human error.

Personalized Care: AI can analyze individual patient data to create personalized surgical plans and recovery strategies.

Improved Training: Surgeons can use AI-driven simulations for training and skill development in a safe and controlled environment.

The Future of AI in Robotic Surgery:

Remote Surgery: AI-powered robots could enable surgeons to perform procedures remotely, expanding access to specialized care.

AI-Powered Surgeons: In the distant future, AI algorithms may be advanced enough to perform routine surgeries independently, with surgeons overseeing the procedures.

Data-Driven Insights: The vast amount of data generated during AI-assisted surgeries can be harnessed to further refine surgical techniques and improve patient outcomes.

Accessibility: As AI becomes more integrated into robotic surgery, the technology could become more cost-effective and accessible to a wider range of healthcare facilities.

KLS INSTITUTIONS

1. Raja Lakhamgouda Law College, Belgaum [1939]
2. Gogte College of Commerce (GCC), Belgaum [1954]
3. School of Business Management, Belgaum [1977]
4. Gogte Institute of Technology (GIT), Belgaum [1979]
5. Institute of Management Education and Research (IMER), Belgaum [1991]
6. Shri. Vasantrao Potdar Polytechnic, Belgaum [1992]
7. GCC Bachelor of Business Administration, Belgaum [1996]
8. GCC Bachelor Computer Applications, Belgaum [1999]
9. KLS Pre-Primary and Primary School, Belgaum [2002]
10. Vishwanathrao Deshpande Institute of Technology (VDIT), Haliyal [2004]
11. Pre-University College, Haliyal [2007]
12. KLS College of Computer Application & Business Administration, Haliyal [2009]
13. KLS Public School, Belgaum [2011]

INSTITUTE VISION

To Make Vasantrao Potdar Polytechnic, Belagavi Stand Out as an Institution of Excellence in Building Technical Skills and to Create Individuals of Outstanding Character, Caliber and Entrepreneurial Skills.

INSTITUTE MISSION

To Train Students of Vasantrao Potdar Polytechnic, Belagavi to Become Creative and Innovative Engineers while Imbibing in them Engineering Ethics and Professionalism, thus Empowering them to serve Human Kind.