"ज्ञान, विज्ञान आणि सुसंस्कार यासाठी शिक्षणप्रसार" – शिक्षणमहर्षी डॉ. बापूजी साळुंखे

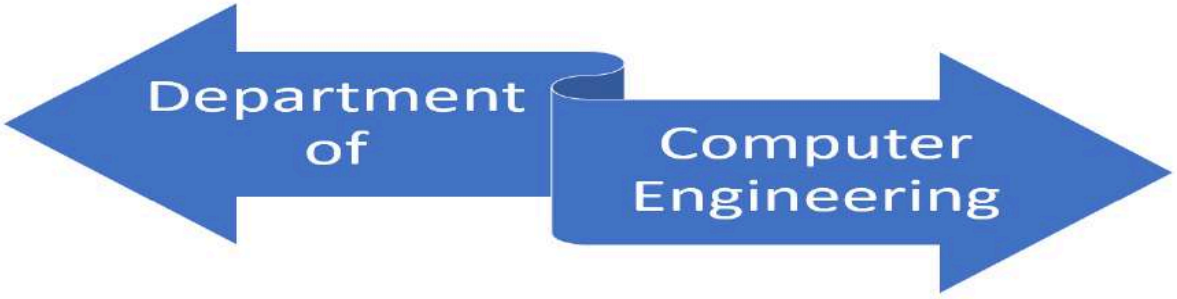
SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S

DR. BAPUJI SALUNKHE INSTITUTE OF ENGINEERING AND TECHNOLOGY

BSiET

DEGREE (Affiliated to DBATU, Lonere) | DIPLOMA (Affiliated to MSBTE, Mumbai)

DTE Code : 6468



NEWSLETTER **MARCH 2025**

Vision

To be the preferred department of activity based education in computer engineering for producing competent professionals with responsibilities towards making digital India.

Mission

M1 – To implement student centric education for activity-based effective teaching-learning mechanism. (Quality Education in OBE process)

M2 – To inculcate critical thinking, and problem-solving attitude through wide variety of projects (Critical Thinking and Research Skills)

M3 – To equip the students with industry skills and practices through industry internships for better job opportunities. (Industry Professionals, skilling)

M4 – To nurture a lifelong learning spirit of responsibility with social and environmental awareness through social and outreach activities. (Sensitizing towards nation building)

PEO's

PEO-1 –Domain knowledge – Diploma Graduates will make use of their technical knowledge along with practical hands-on skills for solving real problems and developing software solutions in IT industry.

PEO-2 –Professionalism – Diploma Graduates will apply soft skills, professional ethics for the growth of their organization.

PEO-3 -Lifelong learning – Diploma Graduates will exercise lifelong learning abilities to adapt the changing technologies for accelerating their professional career growth.

Committee

Chief Editor (HOD) - Mr. Mujawar S.A

Executive Editor - Mrs. A.T. Kulkarni

Faculty Member -

Mrs. S.V Jagtap

Mr.G.B. Koravi

Student Members:

Kumbhar Pratik TY Comp

Narake Samruddhi SY Comp

Chief Editor's Desk:

The Computer Engineering department aims at development of a beneficial upbringing for knowledge, by use of appropriate computing technologies in its everyday activities. The department mainly equips its students with diploma level expertise and appropriate skills in the field of computer science. Students at the computer engineering department are nurtured to become best hardware Engineer, software professionals or Entrepreneurs in their own innovative way. This semester we organized a guest lecture and Industrial visit which helped students to learn advanced software development , Basics of .net platform and Fundamentals of networking and Linux.

Mr. Mujawar S.A

(HOD Computer Engineering)

Academic Achievements :-

MSBTE WINTER 2024

TY COMPUTER

KUMBHAR
PRATIK
SACHIN
96.89%

GUDALE
NAGESH
SHIVSAMB
96%

BOLAIKAR
SIDDHI
SANDIP
95%

SY COMPUTER

SAMRUDDHI
KASHINATH
NARAKE
(95.88)

VAISHNAVI
SANJAY
BHANDIGARE
(92.12)

SHRAVANI
SAMBHAJI
ADANAIK
(91.77)

GAYATRI
DHANAJI
SUTAR
(91.77)

CO - CURRICULAR ACHIEVEMENTS:

1) Pratik S. Kumbhar , Sneha S. Gurav, Mayuri S. Ambale- 1st Rank – at **ExpoTech** 2025. held at **Walchand College of Engineering, Sangli** . honored to be felicitated by Trupti Dhodmise (IAS, AIR 16 – 2019), CEO, ZP Sangli

2) Ganesh S. Kumbhar (Ty-Co) - 1st Rank State level Technical Coding Competition (Reflex 2K25 : Blind Coding) Organized By Department of Computer Engineering .Held At **Ashokrao Mane Polytechnic**, Vathar.

3) Sneha Sadanand Gurav (TY -CO) -

1st Rank State level Technical Paper Presentation Competition (Incepto 2K25 : Paper Presentation)Held At **Government Polytechnic, Karad**

2nd Rank State level Technical Paper Presentation Competition (Reflex 2K25 : Paper Presentation Competition)Organized By Department of Computer Engineering. Held At **Ashokrao Mane Polytechnic, Vathar.**

4) Pratik S. Kumbhar (Ty-Co) -

1st Rank :

State level Technical Paper Presentation Competition (Reflex 2K25 : Paper Presentation Competition) Organized By Department of Electronics and Computer Engineering Held At **Ashokrao Mane Polytechnic**, Vathar

State level Technical Paper Presentation Competition (Code Clash 2K25 : Coding Competition) Held At **Government Polytechnic, Karad**

State level Technical Paper Presentation Competition (Incepto 2K25 : Paper Presentation) Held At Government Polytechnic, Karad

National level Technical Paper Presentation Competition (Impluse 2K25 : Paper Presentation) Organised By Computer and AIML Department Held At Dr. **Bapuji Salunkhe Institute of Engineering and Technology, Kolhapur**

2nd Rank :

State level Technical Paper Presentation Competition (Reflex 2K25 : Paper Presentation Competition) Organized By Department of Computer Engineering

3nd Rank:

State level Technical Coding Competition Organized By Department of Computer

Engineering .Held At **Ashokrao Mane Polytechnic**, Vathar.

5) Ganesh Shankar Kumbhar [TYCO] and Nagesh Shivsamb Gudale [TYCO] - 2nd Rank in National level Coding Competition (C Pro Master) held at **Bharati Vidyapeeth**

6) Sujal VijayKumar Karande [TYCO] and Nagesh Shivsamb Gudale [TYCO] - 1st Rank in National level Coding Competition (Code Crusade) held at **Sanjay Ghodawat Institute[SGI]**

7) Mayuri Shashikant Ambale (TYCO) 4th rank among 37,000 students participated from all over Maharashtra in the **MaTPO Aptitude Idol-2024**

8) Sneha Suryawanshi (Sy-Co) -Winner - State level Poster Presentation (Softclones) Held at **Institute of civil and Rural Engineering, Gargotri.**
2nd Rank National level *Poster Presentation (ANWESHA) Held at **SHRI ANANDRAO ABITKAR COLLEGE OF ENGINEERING, PAL**.

9) Somnath U. Desai (Sy-Co) and Rushikesh A. Patil (Sy-Co) - 2nd Runner up National level Paper Presentation Competition (Ornate 2K24 : Paper Presentation) . Held At **Sharad Institute of Technology Polytechnic,** Yadrav, Ichalkaranji

10) Jivan Jadhav [SY CO] and Nagesh Gudale [TY CO] 2nd Rank in National Level Technical Coding Competition (Code War) held at **Dr A. D. Shinde College of Engineering, Gadhinglaj**

11) Atharva R. Kumbhar (Sy-Co) and Nagesh S. Gudale (Ty-Co) 1st Rank National Level Technical Coding Competition (Yash 2K25 : Code Xplosion) Organized By Department of Computer Engineering Held At **DKTE Society's Yashwantrao Chavan Polytechnic, Ichalkaranji**

12) Atharv Rajendra Kumbhar[SYCO] - 2nd Rank State level Technical Coding Competition Held At **Institute of Rajarambapu Institute of Technology**

Some Glimpse of Our Student Winning Technical Fest Across Kolhapur , Sangli District

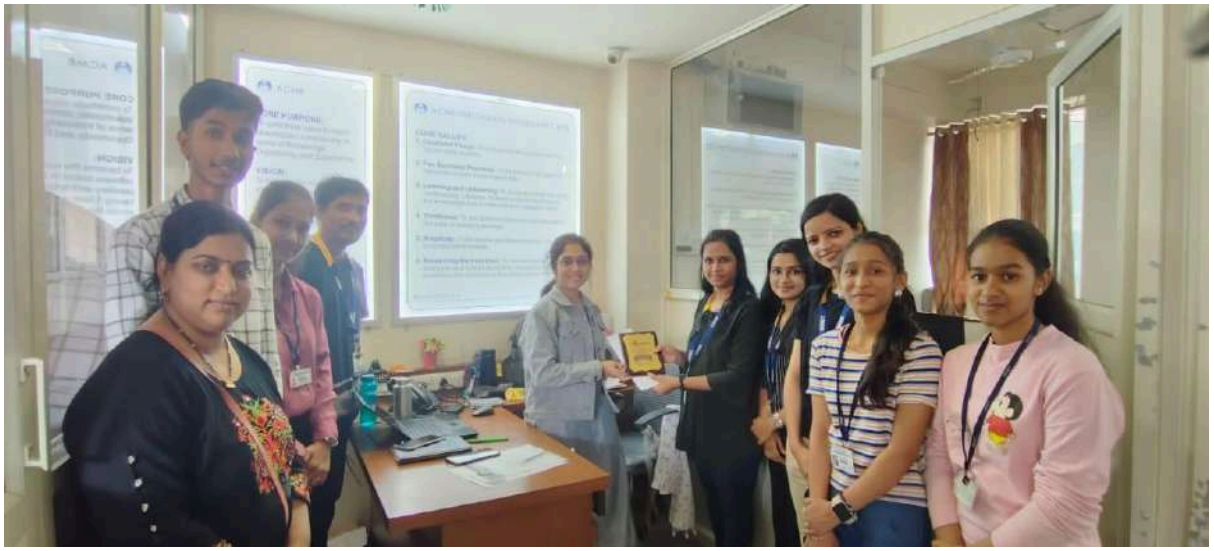
Extra-Curricular Achievements :-

1. Departmental Girls were part of college team that travelled to Latur for Kho - Kho competition.
2. Kirti Priya Bhagwan Lohar Won First prize in Badminton Zonal.
3. Computer science girls (Gayatri Ghatage,Vaishanavi Bhadigare,Dhanshri Chavhan,Sanchita surve) won the prize for Zonal for Kho - Kho.
4. Nilay Potude won first prize for Table Tennis Zonal.
5. SY computer girls also Participated in Running competition for Zonal.
6. Sanchita Surve won first prize for Zonal Carrom.

Some Glimpse of Our Sports Events

Industrial Visit

SY Computer Engineering Department visited the **Acme Infovision System Pvt.Ltd,Satara.**Acme Infovision System Pvt. Ltd. Is software product company.They have software products Acme Insight Software for Retails, Wholesalers, Distributors and Acme Infinity Software for Jewellery Business.Students saw that actually how company works, which departments are there in company,which latest languages,tools are need to learn.Hr Mrs.Sanjivani mam interact with the students.



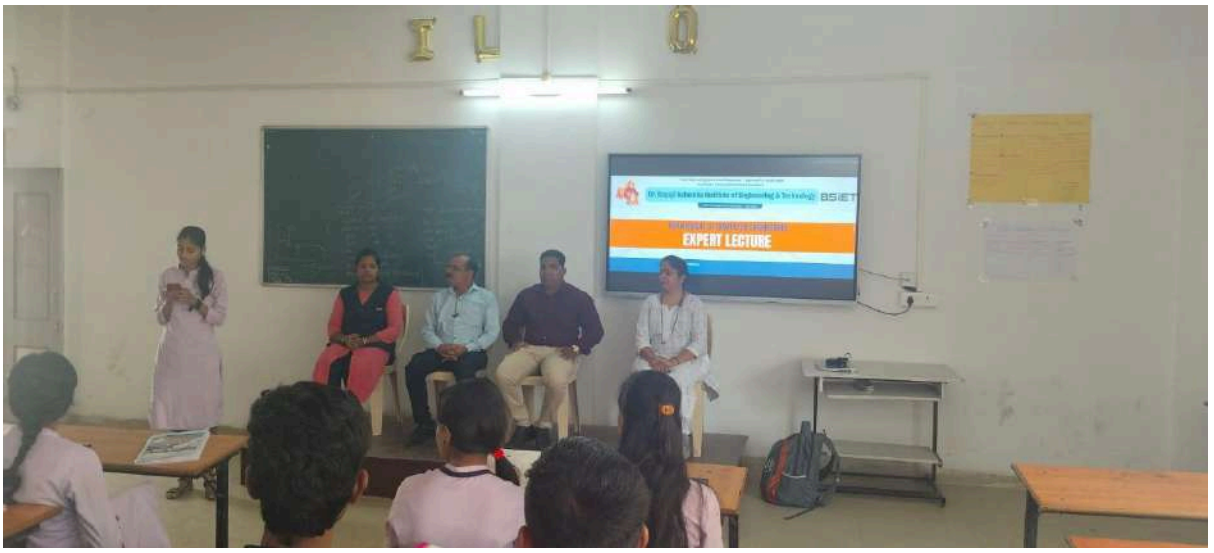
Industrial Guest Lecture

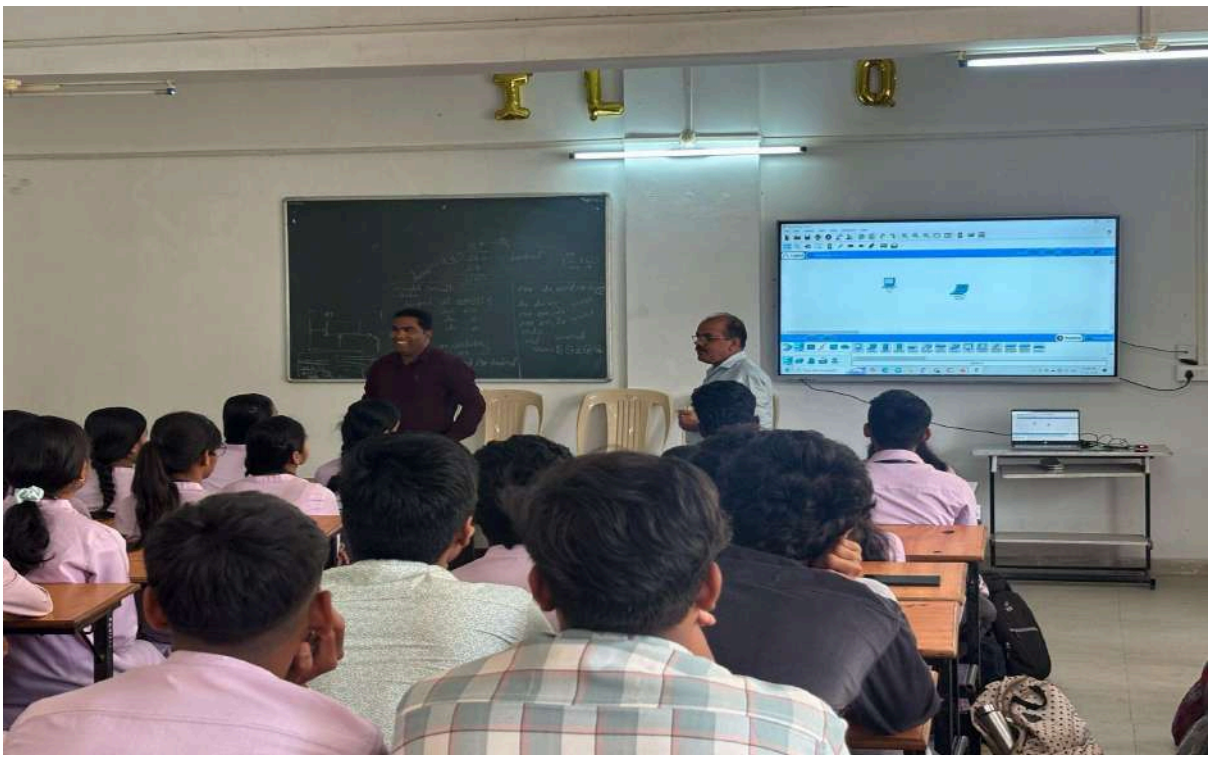
1. Industrial Guest Lecture on **“Integrating IoT with Android: Smart Device Control”** by Mr. Kishor Chafekanade from **iGap Technologies.**

   Purpose : Guest Lecture on “Integrating IoT with Android: Smart Device Control” was arranged for TY computer science students to convey the latest technical knowledge of IOT with android and provide life skills to our students.

2. Industrial Guest Lecture on **"Cloud Networking"** by Mrs. Snehal K Sonalkar, from **Bits Techno.**

Purpose : Guest Lecture on "Cloud Networking" was arranged for SY computer science students to Analyse the functioning of data communication and computer network configure different TCP/IP services.





Some Glimpse of Impulse 2K25

Students Felicitation (MSBTE Result)

Students from SY and TY were felicitated by Department HOD and Staff members for achieving success in MSBTE Winter Examination.

Life Skill development training

Three days Soft skill development training for students organized by TWJ Associates Kolhapur.

Jallosh 2025

“Jallosh 2025” an annual social event was organized in the institute on 25 Jan 2025 at BSIET. Jallosh was a 2 day festival of college that included various events where students got the chance to think , step forward and showcase their talent . Various events were organized like singing and dancing , fashion shows,etc. More than 35 students from the computer department had participated in the event Prof V D Bhirdi sir had inaugurated all events and wished best luck to all participants.

Pratik Kumbhar from Computer Department was felicitated as **Best Student Outgoing.**

Student Article

CardioScope: AI-Powered Heart Disease Prediction System Using Machine Learning

-Mr. Pratik S. Kumbhar

Cardiovascular diseases (CVDs) remain the leading cause of mortality worldwide, responsible for nearly 17.9 million deaths annually, accounting for 32% of all global deaths. In India, the situation is even more alarming, with CVDs contributing to 28% of total deaths. Despite advancements in medical technology, early-stage detection of heart disease remains a significant challenge, leading to late diagnoses and severe complications.

The Significance of Early Heart Disease Detection

Early detection of heart diseases is vital to prevent life-threatening conditions like heart attacks and strokes. Traditional diagnostic methods such as ECG, echocardiograms, and auscultation are effective but often inaccessible, costly, and dependent on expert interpretation, leading to delays and potential misdiagnosis.

CardioScope addresses these challenges by using AI and digital auscultation to provide fast, reliable, and real-time diagnostics. It utilizes a Random Forest Classifier to analyze heart sound data with advanced signal processing techniques such as MFCCs, Spectrogram Analysis, and Wavelet Transform, achieving over 90% accuracy.

Problem Statement

To design and develop AI-based machine learning algorithms for predicting heart diseases using heart sound audio files.

What is CardioScope?

CardioScope is an AI-powered cardiovascular diagnostic system that analyzes heart sound audio files to predict the presence of heart diseases.

Core Functionality of CardioScope

The primary function of CardioScope is to process heart sound recordings (.wav files) and classify them into normal or diseased categories. It detects murmurs, arrhythmias, and valve defects using signal processing techniques and AI models.

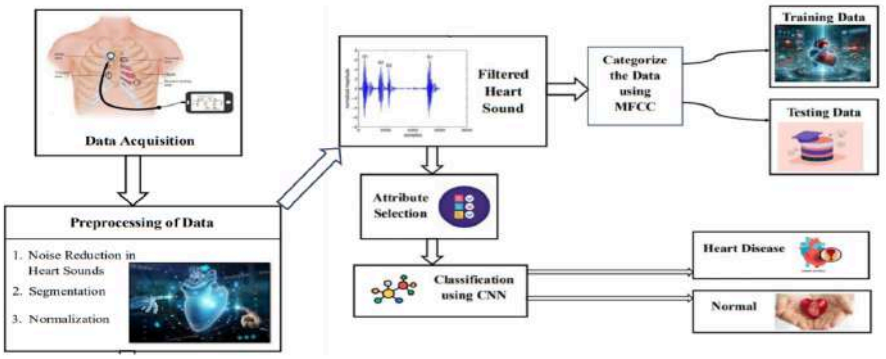


Fig. 1: Proposed methodology for Heart Disease Detection

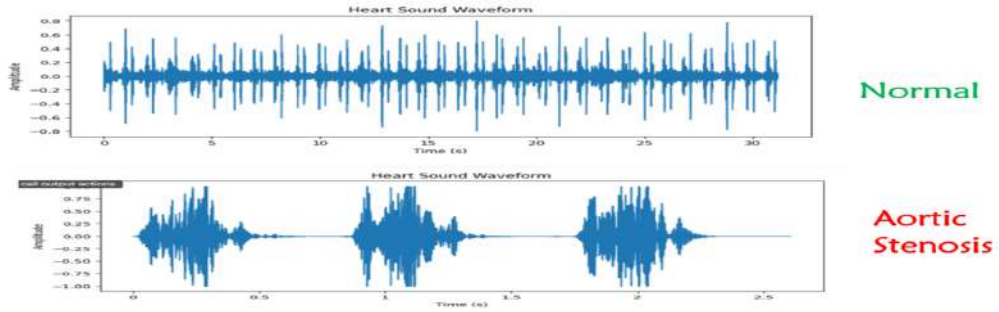


Fig. 2: Heart Sound Waveforms of Normal and Aortic Stenosis.

Conclusion

CardioScope is an AI-powered heart disease prediction system that leverages machine learning, digital stethoscope technology, and real-time signal processing to detect cardiovascular abnormalities with high accuracy. Using a Random Forest Classifier, the system analyzes heart sound waveforms to distinguish between normal and diseased conditions. Its seamless integration with telehealth platforms ensures remote monitoring and timely intervention, making it especially beneficial for underserved areas.

With ongoing advancements in AI models, sensor integration, and cloud connectivity, CardioScope bridges the gap between traditional stethoscopes and advanced diagnostic systems. Its portable, cost-effective, and real-time analysis capabilities provide early detection and improved patient outcomes, making it a transformative solution in preventive cardiac care.

Faculty Article

Healthcare and Medicine using Generative AI: Prospects, Difficulties, and Challenges

By Sahil A. Mujawar

Artificial intelligence (AI) has spurred innovative breakthroughs across a wide range of industries, with a particularly significant impact on healthcare. Among the rapidly evolving AI technologies, generative AI models, such as, Open AI's Generative Pre-trained. Transformer (GPT) models, with the popular ChatGPT model receiving the most attention, have emerged as powerful tools with the potential to reshape the healthcare landscape due to their remarkable natural language processing (INLP) capacity. These advanced language models have an incredible ability to interpret and generate human-like writing, making them perfect candidates for a variety of applications, including medicine and healthcare. By harnessing huge volumes of medical data and knowledge, GPT models can alter numerous parts of the healthcare industry, providing a new era of Clinical independent direction, patient correspondence and information the board. Their capacity to process and appreciate convoluted clinical data affects medical care strategies.

GPT models can assist medical professionals in organizing their thoughts for streamlining their approach, eliciting results, and recognizing the overall structure of medical services administrations through their applications in clinical choice assistance. GPT models exhibit the potential to revolutionize patient communication. As interactive. AI language models. Even though generative models have the potential to revolutionize healthcare and medicine, there remain obstacles and moral issues to be resolved in their integration. It is still vital to ensure the dependability and correctness of AI driven choices, especially in crucial medical situations.

The "black box" character of some AI models, such as generative models, prompts concerns about how interpretable the judgments they produce are, and this calls for increased openness and explicability in AI systems used in the medical field. Furthermore, considerable thought must be given to ethical issues pertaining to patient, data privacy, and potential biases in AI models. By Focusing their large potentials, applications, advantages, challenges, and Moral issues. Efforts to Apply Generative AI and LMs in Medicine and Healthcare in Current Situation This part of examines current research on using Generative AI and LLMs to improve medical practice, including clinical administration assistance and professional

education tools for clinicians and patients. The integration of these cutting-edge technology holds great promise for improving patient care, enabling medical research, and reducing the strain of healthcare workers. By exploring the most recent breakthroughs in this sector, we want to get insight into the revolutionary potential of cutting-edge AI language models in changing the future landscape of healthcare.

One of the well-known application of generative AI models in health care is the automation of clinical documentation, which provides administrative help. Busy practitioners, who are frequently burdened with extensive note-taking, can use ChatGPT's features to write draft clinical notes quickly and accurately. To save physicians time, thorough and contextually appropriate clinical documentation might be generated by delivering a quick vocal summary or pertinent patient data (provided data privacy is respected). Microsoft Copilot is an enterprise application that incorporates generative AI into daily tools such as Word, PowerPoint, Teams, and others to boost productivity. This integration has the potential to significantly improve multidisciplinary collaboration across healthcare teams. Google Bard , driven by Med-PaLM 2, has potential possibilities in healthcare, particularly for providing 24-houripatientisupport and supporting professionals. Med-PaLM 2iimproves Google Bard's ability to generate medical content by training it on a variety of medical information sources including as articles, textbooks, clinical notes, and patient records. The tool can help with answering patient questions, suggesting possible diagnosis, and guiding treatment plans.

Hippocratic man-made AI intelligence centers on making a LLM custom-made for medical services. It expects to offer one that is how restraint focused, focusing on sympathy, care, empathy, and age of patient-accommodating reactions, upgrading patient commitment and effort. This significant idea of 'generative artificial intelligence sympathy' has been exhibited in a concentrate by Ayers et al., who detailed that LLM-controlled chatbot (ChatGPT) reactions were liked over doctor reactions and evaluate essentially higher for compassion. By focusing on non-diagnostic, patient-facing applications, Hippocratic AI values patient safety while improving health are access and outcomes. Hippocratic AI proves beneficial in augmenting administrative tasks and handling complexities like medical coding and licensure exams.