## RESEARCH & CONSULTANCY CELL

### LEARNING CIRCLE

*Let Us Exchange Our Ideas for Better Society*

_____

### REPORT

**Date: 10ᵗʰ September 2024**

**Time: 2:30-4:00PM**

**Venue:** Seminar Hall, Surana College Autonomous, Kengeri Campus, Bangalore.

**Resource Person: Mrs. Bharathi Ramesh,** Assistant Professor & Research Scholar -VTU, Department of MCA, Surana College Autonomous.

**Total No. of Participants: 60 Participants (32 External Participants)**

**Topic: AI Driven Healthcare Data Processing**

In recent years, the integration of artificial intelligence (AI) into healthcare has revolutionized data processing, driving significant improvements in patient outcomes, operational efficiency, and personalized medicine.

**Key Highlights:**

**Role of** AI **in Healthcare Data Processing**

AI encompasses various technologies, including machine learning (ML), natural language processing (NLP), and computer vision, which are being increasingly utilized to enhance healthcare data processing. These technologies enable the analysis of vast amounts of data quickly and accurately, providing insights that were previously unattainable**.**

1.  **Machine Learning (ML):**

    o   Predictive Analytics: ML algorithms can analyze historical patient data to predict future health events, such as disease outbreaks or individual patient risks. For

example, predictive models can forecast patient readmissions, allowing for preventive measures to be taken.

- Disease Diagnosis: AI systems can assist in diagnosing diseases by analyzing medical imaging data, such as X-rays or MRIs. These systems often identify patterns and anomalies that might be missed by human radiologists, leading to earlier and more accurate diagnoses.

2. **Natural Language Processing (NLP):**

- Clinical Documentation: NLP can process and analyze unstructured data from clinical notes, allowing for better data integration and insights. This helps in extracting relevant information for patient records and improving clinical decision-making.

- Patient Interaction: Chatbots and virtual assistants powered by NLP can interact with patients to collect information, provide preliminary diagnoses, and offer guidance, streamlining communication and reducing the burden on healthcare professionals.

3. **Computer Vision:**

- Medical Imaging: AI-driven computer vision technologies can enhance the interpretation of medical images, aiding in early detection of conditions such as cancer or diabetic retinopathy. These tools often leverage deep learning techniques to achieve high levels of accuracy.

**Applications and Benefits**

- Personalized Medicine: AI enables the customization of treatment plans based on individual patient data, including genetic information. This approach increases the likelihood of successful outcomes and minimizes adverse effects.

- Operational Efficiency: AI-driven tools can automate administrative tasks, such as scheduling and billing, reducing operational costs and freeing up healthcare providers to focus on patient care.

- Research and Development: AI accelerates drug discovery and development by analyzing vast datasets to identify potential drug candidates and predict their effectiveness. This process speeds up the development of new therapies and treatments.

Specific Inputs – AI Integration in Cancer Diagnostic and risk level of patient. The future of AI-driven healthcare data processing holds exciting possibilities. Advancements in AI technologies, coupled with growing datasets and improved computational power, will continue to enhance diagnostic accuracy, treatment personalization, and operational efficiency.

Finally, the session concluded with a Q & A segment where the speaker addressed audience queries on the future direction of AI Driven Data Processing.

**Annexure**

1.  **Poster**

## 2. Program Schedule

**SURANA COLLEGE**
**AUTONOMOUS**
Affiliated to Bangalore University | Re-accredited by NAAC with A+
Recognised under section 2(f) & 12(B) of UGC

**RESEARCH & CONSULTANCY CELL**

**LEARNING CIRCLE**

*Let Us Exchange Our Ideas for Better Society*

**10th September 2024**

Venue: **Session Hall No. 302, Surana College Autonomous**

CA-17, Outer Ring Rd, Stage I, Kengeri Satellite Town, Bengaluru, Karnataka 560060

**PROGRAM SCHEDULE**

| Time | Event Flow |
|------|-----------|
| 2:15- 2:30 PM | Arrival of all Faculty Members and Students |
| 2:30-2:35 PM | Welcome Address by Dr Vanishree M R |
| 2:35 -3:25 PM | Topic: **AI Driven Healthcare Data Processing** Resource Person– **Mrs. Bharathi Ramesh, Department of MCA, Surana College Autonomous** |
| 3:25 -3:30 PM | Q&A |
| 3:30 -3:45 PM | High Tea & Network |

Date: 9th September 2024

Dr. Vanishree M.R.
Dean, Research & Consultancy
Surana Educational Institution

## 3. Resource Person – Profile

### Mrs. Bharathi Ramesh

**BSc (CS), MCA, MTech (IT), (PhD)**

**Assistant Professor, Surana College-Autonomous, Bangalore**

An educator in the field of Computer Science with more than 16 years of experience, having hands-on expertise in a range of technical subjects, including programming languages and data development frameworks. Key areas of interest include machine learning and Agile development methodologies.

**Domains of Expertise:**

- ASP.NET
- C#
- Java
- Python
- Web Technologies
- Machine Learning
- R programming
- MongoDB
- Artificial Intelligence
- Design of Algorithms
- Theory of Computations
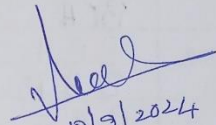- Big Data Analytics

**Career Highlights:**

- Collaborated with Healthcare Global Enterprises Limited (HCG), an organization known for its focus on advanced technologies and treatment modalities for cancer, in various research, publication work and patent work.
- Presented multiple papers at national and international conferences and received the Best Paper Award for the paper titled "**Agile Methodology for Education Systems**" presented at **Sreenivasa Institute of Technology and Management Studies**, Chittoor.
- Have published eight papers in various UGC-listed and Scopus-indexed journals.
- Served as a resource person for a five-day Faculty Academic Exchange Program organized by Surana College in association with **B.M.S. College for Women**. Delivered sessions on **ASP.NET Programming** from July 20, 2020, to July 24, 2020.
- Delivered a lecture on "**Expert Systems in AI**" on February 11, 2023, organized by the Department of Computer Science, Surana College.
- Delivered a lecture on "**Applications of Python Programming and Machine Learning**" organized by the Department of Computer Science, Maharani Ammanni College for Women.
- Delivered a lecture on "**Fundamentals of Python and Data Visualization**" organized by Vidyavardhaka PU College.
- Submitted a thesis titled "**A Viable Approach for Heterogeneous Healthcare Data Processing Using Machine Learning**" to **VTU Belagavi** in association with HCG limited, Bangalore in July 2024.
- Received approval for the patent [Application Number: 202441011122] titled "**A Machine Learning-Based Hybrid Model for Colorectal Cancer Risk Assessment**" from the Intellectual Property Office, Government of India.

## 4. Attendance

| SL.NO | NAME | DEPARTMENT | COLLEGE NAME | SIGNATURE |
|---|---|---|---|---|
| 1 | RAKSHITHA. R. S | BBA | Govt. First Grade College Bugri GFGCK | Rakshitha.R.S |
| 2 | Hemavathi. M | BBA | GFGC | Hemavathi.M |
| 3 | Ramyashree | BBA | GFGCK | Ramyashree |
| 4 | MONIKA. S | BBA | GFGCK | M |
| 5 | Preethi Kumari. G | BCA | GFGCK | Preethi |
| 6 | Poornima. P | BCA | GFGCK | Poornima.P |
| 7 | Jyothika. N | BCA | GFGCk | Jyothik.N |
| 8 | Dr. MANJUNATHN | Library | Govt. First Grade College Bugri | |
| 9 | Hadaval. SP | Dept of Comp. Sc | Govt First Grade college Kogm | SPP |
| 10 | DeePika. S. M | BCA | GOVT. First Grade college range | deepika |
| 11 | Nandini. | BCA | Govt. First Grade college ka | Nandini. |
| 12 | m. Doddamma | B.P.A | gout first grade Coll ken | JA |
| 13 | Manjula. A | B.B.A | gout first grad Collken | Menu |
| 14 | Hajira | B.B.A | gout first grade college | hoyi |
| 15 | Iman Banu | B.B.A | Govt First Grade College | Jul |
| 16 | Sheenlees Goveden | K. sc | Govt first Grade college | |
| 17 | Nagaraju. H | BBA | Govt first Grade college | Nagu |
| 18 | Keerthanka. S | BSC | GFGCKengeri | Keerthana.S |
| 19 | Meghan J. J | BBA | GFGC. Kengeri | |
| 20 | Hrithik. N | MBA | Surana. College | Hrithik.N |
| 21 | Hemanth kumar R | MBA | Surana College | Hmnth |
| 22 | Anup M | MBA | Surana College | Mukesh |
| 23 | Jaahmendra | MBA | Surana college | Jaagoob. |
| 24 | Sarvesh kuma. M | BBA | G.F.G.C kengeri | Sarvesh |
| 25 | NAVEEN. N | BBA | G.F.G.C college | Hemantesh |
| 26 | Hemantesh. S | MBA | Surana College | Hemantesh.S |
| 27 | Madhukumar K. S | MBA | Surana College | MK |
| 28 | Jeevan. K. M | MBA | Surana college | |
| 29 | E hitesh.renu | MBA | Surana college | Hitu |
| 30 | Lohith. K | MBA | Surana college | |
| 31 | Kiran kumar | MBA | Surana college | |
| 32 | Manoj Kumar B. M | MBA | Surana college | Manoj |
| 33 | Akshaya k. V. | M.B.A. | Surana College | A |
| 34 | Hemanth N. | M.B.A. | Surana College | |
| 35 | Charith C. S. | M.B.A. | Surana College | |
| 36 | Chethan M. k. | M.B.A. | Surana College | |
| 37 | Akshay R. B. | M.B.A. | Surana College | |
| 38 | Bipin gowda me | MBA | Surana College | |
| 39 | Devendra kumar | MBA | Surana college | R leg.n |
| 40 | chandrakanth | MBA | Surana college | |
| 41 | Divyashree R | MBA | Surana college | |
| 42 | Bhavana Umak H | MBA | Surana college | |

2024/9/10 16:14

| 43. | Ismail Zabi | MBA | Surana College | *Ismail* |
| 44. | Hifgan Pasha | MBA | Surana College | *Hif* |
| 45 | Kareena Kumari | MBA | Surana college, kengeri | *Kareena* |
| 46. | Bindushree.C | MBA | Surana college | *Bindu* |
| 47. | Aishwarya.V.M | MBA | Surana College | *Aish* |
| 48. | Chaithanya, K.R | " | " | *Chaith y K.R* |

10/9/2024

B. Yanishree M.R.

**SURANA COLLEGE (AUTONOMOUS)**
**RESEARCH & CONSULTANCY**
**LEARNING CIRCLE**

DATE: 10/09/2024

| SL.NO | NAME | SIGNATURE |
|-------|------|-----------|
| 1 | Dr. R SATHEESH KUMAR | RSatheesh 10/09/24. |
| 2 | Dr. S GOKULA KRISHNAN | |
| 3 | Dr. VANISHREE M R | 10/9/2024 |
| 4 | Dr. LASYA K R | Lasya kr. |
| 5 | Dr. SHARADHA S | sharadha 10/9/24 |
| 6 | Dr. BALAJI K | |
| 7 | Dr. SUDHARSHAN H L | |
| 8 | Prof. RINKU MATHEW MODOOR | |
| 9 | Prof. SOUMYA K R | |
| 10 | Dr. Prof. PRAKRUTHI N UDUPA | Prakruthi N.Uy. |
| 11 | Prof. SREEDHAR N | S·N |
| 12 | Prof. SUMA B R | Suma. B·R 10/9/24 |
| 13 | Prof. SUSHMA N | |
| 14 | Prof. SUPRIYA P | Sup 10/9/24 |
| 15 | Prof. PREETHI A | — ON LEAVE — |
| 16 | Prof. S PRASANNA VENKATESH | Pup |
| 17 | Prof. BHARATHI RAMESH | |
| 18 | Prof. CHANDAN HEGDE | |
| 19 | Prof. A HEMA PRABHA | 10/9/24 |
| 20 | Prof. SUJAY SRINIVAS | |
| 21 | Prof. BHAVANA B R | |
| 22 | Prof. MANIKANTAN R | |
| 23 | Prof. RAVI K AGRAHARA | |
| 24 | Prof. SRIDEVI P | |
| 25 | Prof. REJU T | |
| 26 | Dr. GURURAJ F D | |
| 27 | Ms. SHOBHA DYAMANGOUDAR | Shobha |

2024/9/10 16:14

## 5. Gallery













Dr. Vanishree M.R.
Dean, Research & Consultancy
SURANA EDUCATIONAL INSTITUTION