Spandana A P

ap.spandana@gmail.com
linkedin.com/in/spandana-a-p-23451924b/
github.com/spandana2004
+91-9019266900

EDUCATION

BNM Institute of Technology　　　　　　　　　　　*Bengaluru, Karnataka*
Bachelor of Technology in Computer Science and Engineering (9.63 CGPA)　　　*2022 – Present*

Deeksha C F L PU College　　　　　　　　　　　*Bengaluru, Karnataka*
Pre-University Education in PCMC, Karnataka State Board (94.5%)　　　*2020 – 2022*

S J R Kengeri Public School　　　　　　　　　　　*Bengaluru, Karnataka*
10th Board in ICSE (95%)　　　*2008 – 2020*

WORK EXPERIENCE

Software Engineering Intern, BSPUCPA　　　　　　　*July 2025 – Present*
- Developing a robust data management and communication system, "INSIGHT" for the BSPUCPA (Bangalore South Pre-University Colleges Principals' Association).
- It is a unified digital communication and workflow management system connecting DDPU and all affiliated 400+ colleges on a single secure platform including features like info exchange, chat interface, circular page, and infrastructure page.
- The Beta version was officially launched on 3rd December 2025.

Project Intern (CoPhe Lab), IIT Madras　　　　　　　*July 2025 – Dec 2025*
- Developed a dual-policy Reinforcement Learning framework for a bio-inspired autonomous navigation agent.
- It involved implementing novel bio-inspired strategies for navigation in robotics systems by taking inspiration from dung beetles like organisms and testing out by simulating complex environment on MUJOCO.

Intern, Sasken Technologies Limited　　　　　　　*Jun 2025 – July 2025*
- Developed TechQABot - A Tech Community QA Bot using agentic and generative AI concepts.
- The bot is trained with data from multiple tech communities such as Stack Overflow and Reddit, and efficiently answers questions related to Python programming.

Technical Intern, Appzera (OPC) Private Ltd.　　　　　　　*April 2025 – Jun 2025*
- Developed a RAG-based chatbot to provide humanized responses.
- The chatbot features included identifying the best university for higher studies.
- The chatbot was efficiently analyzing the user's intentions and responding with a list of universities based on courses, country, fee, scholarships, etc., suitable for the user

Intern, U R Rao Satellite Center - ISRO　　　　　　　*Jan 2025 - Mar 2025*
- Researched quantum algorithms for phase estimation and developed a comparative study between the classical phase estimation and quantum phase estimation.
- Developed "Shakers" Android app, designed to identify suitable shakers in real-time for payload testing at the Vibration lab.

PROJECTS

GreenLoop
- Smart Cloud-based AI-powered waste reporting and management system. [*Live Web App*]

Identifying Patterns and Trends in Campus Placement Data Using Machine Learning
- Utilized Applied machine learning algorithms to analyze placement data and generate tailored career insights for students.
- Published research findings in an international journal (IJEME, 2025). [*GitHub*]

Proactive Dropout Mitigation for School Student Success
- Developed a full-stack Student Management System enabling 100+ record entries and improving dropout identification, with accuracy of 94%.
- Work published in IEEE explorer.

Verbal Ability Grading System
- Designed an AI-driven assessment tool for evaluating verbal communication skills using speech input.
- Implemented modules for speech recognition, text/audio analysis, scoring, and feedback generation to provide graded performance reports. [*GitHub*]

Predicting Problematic Internet Usage in Youth
- Built a predictive framework to detect excessive internet usage in adolescents using the Healthy Brain Network dataset.
- Work registered for copyright.

Other projects:
- Denoising Sine Wave Signal (DL), Fake Video Detection (DL), Lung and Cervical Cancer Detection (DL), Chatbot for Learning Generative AI (Generative AI), AICTE Activity Points Tracking System (Android App)

ACHIEVEMENTS

- Runner-up of 8th National Level IEEE Project Competition-2024 at GSSSIETW, Mysore.
- Runner-up of Generative AI Hackathon conducted by Pantech e-Learning.
- Finalist in the Matrix Forum University Awards 2025 conducted by TiE Bangalore - Matrix Forum.
- Awarded for topping the department for the 1st and 2nd semesters and received a scholarship for the same.

SKILLS

- **Programming:** Python, Java, C
- **AI/ML & Data Science:** Machine Learning, Deep Learning, NLP, Predictive Modeling, Data Analysis, Model Evaluation, TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, RL
- **Web & Database:** MySQL, MongoDB, Streamlit
- **Data & Problem:** Data Structures, Algorithms, Problem Solving

COPYRIGHT & PUBLICATIONS

- NetAware: Activity-Based Prediction of Internet Misuse, Registered under Indian Copyright. (*ROC*)
- Multi-Modal Data Exploration and Analysis for Predicting Severity Impairment Index Using Actigraphy and Behavioral Metrics, ICCTDC-2025, HASSAN, India, 2025, pp. 1-5, doi: 10.1109/ICCTDC64446.2025.11158835.
- Identifying Patterns and Trends in Campus Placement Data Using Machine Learning, International Journal of Education and Management Engineering (IJEME), Vol.15, No.1, pp. 10-24, 2025. DOI:10.5815/ijeme.2025.01.02
- Soft Alert Generation for Student Dropout Mitigation and Proactive Management by Machine Learning Algorithm, Presented at the IITCEE - Jan 16, 2025
- A Survey on the Usage of Numerous ML Models for Agriculture, Presented at the IITCEE - Mar 20, 2024
- Real-time Structural Health Monitoring System using IOT, Book Name: Futuristic Trends in IOT Published in: IIP Series, Year: 2024 e-ISBN:978-93-6252-126-2

CERTIFICATIONS

- Artificial Intelligence for Economics – NPTEL(IITK)
- Ai Business Intelligence Analyst – NCVET, MSDE, Govt. of India
- Machine Learning for Engineering and Science Applications – NPTEL(IITM)
- Database Management - Great Learning
- Journey to Cloud: Envisioning Your Solution - IBM
- Getting Started with Enterprise Data Science - IBM
- Android Application Development - Great Learning
- IBM Hack Challenge -2023