GANGASAGAR HL

International Institute of Information Technology, Bangalore

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https://github.com/Gangasagarhl/

Education

International Institute of Information Technology Bangalore **July 2024 – Present**
M.Tech in Computer Science *3.58/4*

Sapthagiri College Engineering **August 2017 – July 2021**
Bachelor of Engineering in Computer Science *3.59/4*

Experience

SmartBridge, Remote **March 2021 – April 2021**
Machine Learning Intern

* Built a CNN-based model to classify satellite images (icebergs vs. ships) using Python and Flask.
* Deployed the solution on IBM Cloud Foundry for real-time monitoring and alert generation.

SmartBridge, Remote **August 2020**
IoT Intern

* Built and deployed an end-to-end surveillance system using IBM Watson IoT for real-time monitoring and control.
* Integrated image capture with Cloud Object Storage, Cloudant DB for metadata, and Watson Visual Recognition for classification.
* Orchestrated services using Node-RED and triggered Fast2SMS alerts for unrecognized faces via mobile app.

Projects

Security System — Python, Flask, PyTorch, LangChain, Raspberry Pi 3B+, TensorFlow, FAISS **April 2025**

* Deployed a fine-tuned MobileNetV3-small (TensorFlow Lite) on Raspberry Pi for real-time object detection and alert-triggered video/image streaming to IIITB server.
* Integrated BLIP, T5, and Llama 3.2 on the server to auto-summarize alerts and deliver notifications via Twilio, WhatsApp, and Gmail based on threat levels.
* Built a RAG system with FAISS to store and summarize daily image data; exposed summaries via REST API for admin-level querying.
* Developed a compact GPT model (`sagar-neuron-gpt2`) completley in PyTorch for low-memory devices like Raspberry Pi; supports on-device training and inference.

Banking Management System — C **November 2024**

* This system stimulates the core functionalities including customer management, transaction handling loan processing and administrative oversight.
* The system was developed using system calls, websockets and file locking programming concepts

Radiology Connect — Java Spring Boot, MySQL, MongoDB, ReactJS, JWT **May 2025**

* Developed a secure teleradiology platform for remote access and storage of medical images using Spring Boot and React.
* Implemented a dual-database architecture (MySQL and MongoDB) to handle structured patient records and unstructured imaging data.
* Integrated JWT-based authentication and real-time messaging to enable secure communication between doctors and radiologists.

TeleManas Project — Flask, ReactJS, LangChain, MySQL, Pandas **January 2025 – Present**

* Contributed to a government mental health initiative by analyzing datasets to identify trends and generate insights for stakeholders.
* Designed and developed an intelligent dashboard that converts natural language queries into data visualizations using LangChain.
* Ongoing development includes expanding visualization capabilities and refining insights based on evolving stakeholder needs.

Publications

Predicting Soil pH using Mobile Captured Picture **March 2021**
- · Gangasagar HL, Jovin Dsouza, Bhagyashree B Yargal, Arun Kumar SV, Anuradha Badage. *International Research Journal of Engineering and Technology (IRJET)*, Vol. 08, Issue 07, July 2021.

Technical Skills

Languages: Python, C, C++
Technologies/Frameworks: Tensorflow, Pytorch ,Docker, Git, Github, Github Actions, Flask, MYSQL,SQL , ML Flow, Apache Airflow, Raspberrypi

Relevant Coursework

∗ Software Systems	∗ Machine Learning	∗ ESD	∗ MOML
∗ Concrete Mathematics	∗ Mathematics For ML	∗ Visual Recognition	∗ Project Elective

Leadership / Extracurricular

- · Volunteered in institute-level activities and events under the Aikyam student body.
- · District Level Table Tennis Winners.