Gautham Manuru Prabhu

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GitHub, LinkedIn, Google Scholar

Education

Manipal Institute of Technology — Manipal, Karnataka
B.Tech Computer Science *CGPA:* ***8.91***
Minor Specialization: Big Data — 2020 - 2024

Little Rock Indian School — Brahmavar, Karnataka
High School *Percentage:* ***95.60%*** — 2008 - 2020

Experience

Cisco Systems Inc. (Supply Chain Organization) — **JAN 2024 - JUN 2024**
Software Engineering Intern

- Scaled an internal tool with backup servers across multiple global manufacturing sites.
- Set up and maintained dev, staging, and production servers.
- Developed API features and resolved bugs using Python.
- Automated release notes generation by grouping sprint work.
- Implemented CI/CD pipelines for automation.

Indian Institute of Technology, Kharagpur — **JUN 2023 - AUG 2023**
Deep Learning Intern

- Worked on detecting retinal abnormalities in OCT scans.
- Engineered an ensemble-based feature fusion methodology.

Skills

Python, Linux, Jenkins, Redis, Celery, Flask, Pytest, Bash scripting, Jira, Machine Learning, Deep Learning, NLP, CV, Tensorflow, Qiskit, OpenCV, C++, C, Java, SQL, Django, Hadoop, Javascript, Git

Projects

VIKAS *Python, NLP, CV*

Proposed a solution VIKAS, which is a real-time, multimodal solution that links **disaster victims** and first responders from NDRF thus **streamlining support** to the most vulnerable when a disaster takes place. The solution employs NLP to classify **tweet relevancy**, and CV to quantify the severity and nature of the damage.

Quantum Ecosystem for Efficient Medical Imaging *Qiskit, Pytorch, Computer Vision, Streamlit*

Developed a quantum machine learning framework tailored for the analysis of ECG data, leveraging **quantum architectures** to facilitate rapid data processing and feature extraction. The project was funded by the **Ministry of Electronics and Information Technology** and **AWS**.

Efficient Banking System *Python, Socket Programming*

Designed a **scalable** client-server banking application that offers a suite of financial services, including **concurrent deposit and withdrawal functionalities**. The server architecture is built on a multi-threaded model, ensuring the simultaneous processing of client requests without bottlenecks. The software features real-time updates, secure client-service communication and and guarantees transactional integrity.

Publications

1) **QuCardio**: Application of Quantum Machine Learning for Detection of Cardiovascular Diseases
2) **VIKAS**: A Multimodal Framework to Aid in Effective Disaster Management
3) **EyeEncrypt**: A Cyber-Secured Framework for Retinal Image Segmentation
4) Addressing Vaccine Misinformation on Social Media by leveraging Transformers and User Association Dynamics
5) A Systematic Review of Deep Learning Approaches for Vessel Segmentation in Retinal Fundus Images

Positions of Responsibility

Co-founder and Technical Head, Project Kalpana
General Secretary and Treasurer, Association for Computing Machinery, Manipal

Awards

1) Smart India Hackathon **Finalist** - Ministry of Education, Government of India.
2) **Quantum Science and Technology Hackathon** - Participated in the grand finale among the **Top 16** teams worldwide from 25 countries.
3) Presented a poster at the **IIT Kharagpur**, Digital Health Symposium.
4) Presented a poster at the **Workshop on Tensor Computation and Machine Learning, IISc**.
5) **National Talent Search Exam (NTSE) State Scholar**.

Certification

Optimization for Machine Learning and Operations Research -**Indian Institute of Technology, Goa**
Dynamic Resource Allocation Problem - **Indian Institute of Science, Bengaluru**