SUBHASH MOTHUKURU

Data Scientist

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EDUCATION

Concordia University Wisconsin — Mequon, WI

Master of Science in Computer Science ; GPA: 3.7/4.0 — August 2023 – May 2025

Relevant Courses: AI, Advanced Algorithms, Data Security, RESTful APIs, Database Admin;

SKILLS SUMMARY

Languages: Python, Java, C, SQL, HTML, CSS, JavaScript

ML & AI: scikit-learn, PyTorch, TensorFlow, CNN, RNN, LSTM, Bidirectional LSTM, Transformers, Generative AI, Large Language Models (LLMs), Fine-tuning, Prompt Engineering

Quantum Computing: Qiskit, BB84 Protocol, Shor's & Grover's Algorithms

Tools & Platforms: Flask, Docker, Kubernetes, Jenkins, Git, Spring Boot, Spring Security, MongoDB, MariaDB

Data Science: NumPy, pandas, Matplotlib, Seaborn

Mathematics for ML: Linear Algebra, Statistics, Probability

Domains: AR/VR (Unity), RESTful APIs, Microservices, Data Visualization

WORK EXPERIENCE

Research Assistant — Concordia University Wisconsin – Mequon, WI — Nov 2023 – Nov 2024

- Developed AR/VR applications in Unity, reducing latency by 15% through rendering optimizations.
- Enhanced interaction quality and user satisfaction via targeted system improvements.
- Resolved technical issues collaboratively, increasing development efficiency by 10%.

ML Engineer & Software Engineer — Ratna Global Technologies – Hyderabad, India — Nov 2021 – May 2024

- Built and deployed ML models using scikit-learn, enhanced performance by 25%.
- Integrated ML pipelines using Flask and Docker for real-time deployment.
- Led backend development using Spring Boot, increasing productivity by 20%.
- Boosted test coverage by 30% through strategic use of JUnit and integrated APIs with Spring Security.

Software Engineering Intern — 360digrii – Hyderabad, India — June 2021 – Nov 2021

- Built full-stack apps using Java, C, and ReactJS while adopting clean code principles.
- Designed and tested sample applications to demonstrate cross-technology skills

PROFESSIONAL PROJECTS

E-Commerce Product Recommendation System (LetMeCall)

- Engineered a recommendation system using scikit-learn and RNN, achieving 90% accuracy through collaborative filtering and sequence modeling.
- Deployed the solution with Flask and Docker, enabling real-time prediction and visualizing insights using Seaborn and Matplotlib.

- Collaborated with a cross-functional team of 5 developers and data analysts to refine user data pipelines, improving model training efficiency by 20%.
- Integrated user feedback loops via RESTful APIs, enabling continuous model retraining and enhancing personalization.

AR/VR Application (Pre-Construction)

- Developed VR experiences with Unity and C#, using CNN in PyTorch to improve object recognition accuracy by 15%.
- Optimized performance and deployed via GitHub, enhancing user engagement through ARKit/ARCore integrations.
- Collaborated with 3D designers and ML engineers to implement real-time spatial mapping, reducing rendering lag by 12%.
- Designed and integrated gesture-based controls using Unity's XR Toolkit, enhancing user interaction and accessibility.
- Led code reviews and version control workflows with Git, ensuring seamless team collaboration and deployment stability.

Web Application (LetMeCall)

- Designed and implemented RESTful backend endpoints in Java, leveraging MariaDB for efficient data storage and retrieval, leading to a 20% reduction in response times.
- Enhanced security with Spring Security and error tracking using Log4j, ensuring reliable and secure application performance.
- Automated deployment using a Jenkins CI/CD pipeline integrated with GitHub, optimizing deployment processes and version control.
- Collaborated with frontend developers to implement a responsive UI using ReactJS, improving user satisfaction scores by 15%.
- Developed custom logging and monitoring tools with Spring Boot Actuator, enabling proactive issue detection and resolution.

PERSONAL PROJECTS

Real-time Quantum-Secure Messaging Application : LINK

- Built a quantum-secure messaging platform using Python, Qiskit, and Flask, implementing BB84 QKD for secure communication.
- Enabled real-time messaging, file transfers, and eavesdropper detection, with a responsive UI (HTML/CSS/JS) deployed on GitHub.

Predicting Math Scores: LINK

- End-to-End ML Project Developed an ML pipeline with scikit-learn to predict math scores (R^2 = 0.87), comparing regression models (Linear Regression, Random Forest, Gradient Boosting).
- Deployed a Flask web app for real-me predictions, using NumPy and pandas for data handling.

CERTIFICATIONS & ACHIEVEMENTS

Quantum Computing – *Qubit x Qubit (The Coding School, CA)* (*Aug 2024 – May 2025)*

Prompt Engineering – *DeepLearning.AI (Nov 2024)*

Mathematical Foundations of ML – *Udemy* (*Oct 2024)*

Star of the Month – *Ratna Global Technologies*

- Awarded for outstanding project performance and delivery.