Saneeth Reddy Etikala

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"Motivated Electrical and Computer Engineering graduate student with expertise in embedded systems, data analytics, machine learning, and software development. Experienced in teaching, research, and industry projects, with skills in MATLAB, Python, C, and Verilog. Seeking a full-time role to apply technical, problem-solving, and research skills in engineering, software development, or data science."

Education

University of New Mexico — Albuquerque, NM
Master of Science in Electrical and Computer Engineering — Jan 2023 – Dec 2024
CGPA: 3.8/4.0

Experience

University of New Mexico — **Jan 2024 – Present**
Graduate Apprenticeship — *Albuquerque, NM*

- Course Instruction Planned and presented lectures and activities on **MATLAB** and **Python**, utilizing speed grader for efficient assessment.
- Student Support & Assessment Led help sessions for students taking introductory-level **ECE 130L** course. Graded all homework assignments and tests.
- Web Design & Development Designed and maintained course web resources, improving accessibility and student engagement using **HTML, CSS, and JavaScript**.
- Software Tools Development Developed **Python** scripts to automate grading and student progress tracking, improving efficiency by **30%**.

University of New Mexico — **Feb 2023 – Dec 2023**
Teaching Assistant — *Albuquerque, NM*

- Lecture & Lab Sessions Led lectures and lab sessions for **ECE 314L** (Signals and Systems) and **ECE 130L** (Engineering Computing).
- Grading & Assistance Graded assignments and assisted students in **MATLAB** and speed grading.

Amazon Development Centre — **Oct 2021 – Oct 2022**
Quality Specialist — *Hyderabad, India*

- Database Optimization & Query Performance Developed and optimized SQL queries in **PostgreSQL**, reducing query execution time by **45%** and improving overall database efficiency.
- Python Scripting for Automation Designed and implemented **Python** scripts to automate data processing tasks, reducing manual effort by **60%**.
- Data Analysis & Reporting Extracted and analyzed large datasets using **SQL** and **Python (Pandas, NumPy)** to identify trends, improving decision-making for Amazon Go stores.
- API Development & Integration Developed and tested RESTful APIs for internal mapping tools using **Python** and **PostgreSQL**, improving response times by **30%**.
- Cross-functional Collaboration Collaborated with product managers and software engineers to streamline data pipelines, optimizing internal processes and reducing manual interventions by **50%**.
- Cloud Integration Worked on integrating internal tools with **AWS services**, improving data processing efficiency and enabling better scalability for business operations.

Chegg India — **Mar 2021 – Oct 2021**
QA Expert (Freelance) — *Hyderabad, India*

- Textbook Problem Solutions Helped students solve computer science textbook problems using **Python** and **web development**, improving student understanding and performance.
- API Development & Integration Maintained academic integrity and followed strict guidelines, improving compliance by **20%**.
- Collaboration & Agile Practices Worked closely with cross-functional teams, improving deployment efficiency by **15%** through Agile methodologies.
- Student Support & Guidance Provided detailed solutions to problems in computer science courses, enhancing students' academic understanding and success in exams.
- Problem-Solving Optimization Identified and implemented improvements in problem-solving techniques, cutting down solution time by **25%** while maintaining accuracy.

Skills Summary

Languages: Python, Java, C++, C, JavaScript, Data Structures and Algorithms.

Tools/Frameworks: Postman, Jira, Spring Boot, Bootstrap, React, Angular, GIT, Visual Studio, IntelliJ, MATLAB.

Database: MySQL, SQL, MongoDB.

Platforms: Linux, Windows.

Methodologies: Agile, Service Management, Capacity Management.

Soft Skills: Leadership, Adaptability and Quick Learning, Public Speaking, Time Management.

Certifications: Java, Cryptography and Networking Security, Introduction to Machine Learning, Web Development, Oracle Cloud Infrastructure 2024 Gen AI Certified Professional.

Activities: Secretary - Robotics & Automation Society, IEEE Sreyas Student Branch, Volunteer - National Service Scheme.

Projects

Real-Time Sentiment Analysis Dashboard
(React | Python | TensorFlow | MongoDB)

- Dashboard Development Built a real-time dashboard using **React** and **TensorFlow** to analyze Twitter sentiment trends.
- Backend & Database Designed a **Flask** backend with **MongoDB** integration for efficient data handling and storage.
- Deployment Deployed on **Google Cloud Platform** with CI/CD pipelines for reliability and scalability.

AI-Powered Inventory Management System
(React | Python | TensorFlow)

- Intelligent System Developed an intelligent inventory system with **TensorFlow**, reducing holding costs by **20%**.
- Dashboard & Deployment Built real-time dashboards with **React** and deployed on **Google Cloud Platform** with CI/CD pipelines.

Graduate Projects

Image Processing Based Intelligent Traffic Control System
(MATLAB | C Programming)

- Traffic Control Design Designed a traffic control system using image acquisition and enhancement techniques.
- Implementation Implemented these techniques using **MATLAB** and **C** languages.

Vowel Onset Point Detection Using Spectral Evidence
(MATLAB)

- Speech Processing Developed a vowel onset point (VOP) detection system, crucial for **automatic speech recognition**, **speaker identification**, and **speech synthesis**.
- Spectral Analysis Utilized spectral evidence to analyze speech signals and detect vowel onset points.

Vowel Onset Point Detection Using Spectral Evidence
(MATLAB, Python)

- Speech Processing Developed a vowel onset point (VOP) detection system, crucial for **automatic speech recognition**, **speaker identification**, and **speech synthesis**. Implemented signal processing techniques in **MATLAB** and **Python**.
- Spectral Analysis Utilized spectral evidence to analyze speech signals and detect vowel onset points, leveraging **NumPy, SciPy, and Librosa** for advanced signal processing.

Microgrid Generation Mix Selection
(MS Excel)

- Project Goal Designed a microgrid for **UNM main campus** incorporating **natural gas generators**, **PV**, and **battery energy storage systems (BESS)**.
- Sizing & Analysis Determined the optimal size and location of generation units to ensure continuous operation during an **8-hour outage**.
- Implementation Developed a dispatching program executed using **MS Excel**.