Mohammed A. Ansari

mohammed.ansari@sjsu.edu | (669)-288-3655 | LinkedIn: Mohammed Ansari| GitHub: Bytemaverick| Website: mohammedansari.dev

EDUCATION

San Jose State University   **San Jose, California**
B.S. Data Science   *Expected Graduation, Jan 2027*
- Dean's List 2023/2024

TECHNICAL SKILLS

- **Programming:** Python, Java
- **Libraries & Frameworks:** Scikit-learn, TensorFlow, Keras, Hugging Face, OpenCV
- **Concepts:** ETL pipelines, data modeling, data pipelines
- **IoT & Automation:** Raspberry Pi, Home Assistants
- **Databases:** MySQL, MongoDB
- **Web Scraping tools :** Selenium, Beautiful Soup, Requests, and Pytube
- **Data Analytics and Visualization:** NumPy, Pandas, Matplotlib
- **Other Tools:** Docker, Git, Bash, Postman, Cloudflare

PROJECTS EXPERIENCE

Potato Disease Classification Using CNN   **San Jose, California**
Creator   *Feb 2025 – Present*
- Built a CNN model using TensorFlow/Keras to classify potato leaf diseases (Late Blight, Early Blight, Healthy).
- Achieved 97% accuracy, reducing potential crop losses by detecting plant diseases early.
- Optimized the model with Adam optimizer and categorical cross-entropy, improving inference speed by 20%.
- Implemented data flow pipeline reduced data preparation time by 30% through augmentation and normalization.
- Currently working on deploying a mobile app (React Native) for real-time classification using a quantized model.

AI-Assisted Fencing Refereeing (Computer Vision & Machine Learning)   **San Jose, California**
Team Member   *Feb 2025 – Present*
- Researching and developing an AI-powered refereeing system for fencing using CNNs, RNNs, and audio analysis.
- Benchmarking AI referee performance against existing implementations to improve accuracy and decision-making.
- Designing a real-time AI system to provide visual indicators of priority, enhancing refereeing, match analysis, and viewer engagement
.

Home Automation System(Implementation of IoT)   **Tracy, California**
Creator   *Dec 2024 – Dec 2024*
- Designed and implemented a home automation system using Raspberry Pi, Docker, and Home Assistant.
- Installed and configured Home Assistant, added devices to the platform, integrated with HomeKit and Google Home, and automated data backup to Google Drive upon new device additions.
- Secured remote access by purchasing a domain and configuring Cloudflare tunnels, ensuring reliable off-site control.
- Designed a system to store IoT data in a database, enabling analytics and future efficiency projections using learning algorithms.

Facial Recognition Classification Model   **Tracy, California**
Creator   *Nov 2024 – Dec 2024*
- Extracted and organized a dataset of 8,500 facial images spanning 50 individuals for model training and evaluation.
- Transformed the data by conducting exploratory data analysis (EDA) and applying preprocessing techniques, including Haar cascade algorithms for feature extraction and OpenCV for face detection and image manipulation.
- Implemented and optimized classification algorithms, including Support Vector Machine, Logistic Regression, and Random Forest, using grid search for parameter optimization, achieving 85% accuracy with SVM after extensive hyperparameter tuning.

LEADERSHIP AND ACTIVITIES

Machine Learning Club@SJSU   **San Jose, California**
Recruitment Officer   *Feb 2025 – Present*
- Organized onboarding sessions and engagement activities to retain members and enhance participation in club events.
- Managed member communications via email,and Discord to keep members informed about projects, workshops, and industry events.
- Developing an automated system to simplify and enhance the member onboarding experience.
- Tracked member engagement and conducted weekly analytics to assess participation and retention.

Bioinformatic Clubs   **San Jose, California**
Member   *Sep 2024 –Present*
- Collaborated with peers on discussions and research topics in bioinformatics.
- Attended guest lectures and workshops featuring professionals in computational biology and biotechnology.

RELATED COURSEWORK

- **Data Structures and Algorithms:** Applied advanced tree structures, priority queues, heaps, graphs, and sorting algorithms through LeetCode-style problems. Experienced in greedy algorithms, and dynamic programming for efficient problem-solving.
- **Object-Oriented Design:** Implemented Java OOP principles with classes, Developed agent based simulation, UML diagrams, design patterns, GUI development, exception handling, and concurrent programming.
- **Advanced Programming with Python:** Developing projects focusing on GUI development, data analysis with Pandas, web scraping, and Flask web applications.
- **Big Data and Machine Learning:** Analyzing large-scale data, automating tasks with shell scripts, implementing traditional ML algorithms from scratch and applying ML techniques across domains.
- **Mathematics for Data Science:** Linear Algebra, Discrete Mathematics, Calculus.