

Mohammed A. Ansari

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EDUCATION

San Jose State University

B.S. Data Science

- Dean's List 2023/2024

San Jose, California

Expected Graduation, May 2027

TECHNICAL SKILLS

- Programming:** Python and Java
- Operating Systems:** MacOS, Linux and Windows
- Containerization & Cloud Security:** Docker, Cloudflare (secure tunnels and DNS setup)
- Productivity Tools:** Microsoft Office Suite, Google Workspace
- Databases:** MySQL, and MongoDB
- Python Libraries:** NumPy, Pandas, Matplotlib, OpenCV, Scikit-learn, TensorFlow.
- Other skills and tools:** Raspberry Pi, networking tools, Postman, and home assistant.

PROJECTS EXPERIENCE

Potato Disease Classification Using CNN

Creator

San Jose, California

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%.
- Processing 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)

Team Member

San Jose, California

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)

Creator

Tracy, California

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

Creator

Tracy, California

Dec 2024 – Present

- Collected and organized a dataset of 8,500 images of 50 individuals, conducted exploratory data analysis, and preprocessed using Haar cascade algorithms for feature extraction and OpenCV for image manipulation and face detection.
- 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.
- Currently developing a website to deploy and interact with the facial recognition model for real-time testing.

LEADERSHIP AND ACTIVITIES

Machine Learning Club@SJSU

Recruitment Officer

San Jose, California

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

Member

San Jose, California

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.