Manu Mathew Jiss

San Francisco, Bay Area, USA | manumathewjiss18@gmail.com | LinkedIn | GitHub | Google Scholar

Education

University of the Pacific, Stockton, CA *Spring 2026*
Master of Science in Computer Science

APJ Abdul Kalam Technological University, Kerala, India *Summer 2023*
Bachelor of Technology in Computer Science and Engineering

Technical Skills

Programming Languages:	Python, C++, JavaScript, TypeScript, MATLAB, Bash/Shell Scripting, SQL, HTML, CSS
Machine Learning & AI:	TensorFlow, PyTorch, Scikit-learn, YOLOv5, ResNet-50, LLMs, RAG, NLP, Text Classification, Sentiment Analysis, Zero-Shot Learning, Toxicity Detection, BERTweet, HateBERT, DistilRoBERTa, DNN, VADER, TextBlob, SHAP, LIME, Hugging Face Transformers, OpenAI API
Databases & Data Engineering:	MongoDB, PostgreSQL, Redis, ClickHouse, ETL Pipelines, Data Warehousing, Incremental ETL, Metadata Lineage
Backend, Tools & Frameworks:	Flask, FastAPI, Node.js, Express.js, Next.js, Streamlit, REST APIs, Authentication Systems, ROS/ROS2, AWS Lambda, Docker, OpenCV, Jupyter Notebook, VS Code, Git/GitHub, CUDA, JetPack SDK
APIs & Data Sources:	Reddit API, Twitter/X API, YouTube Data API, Yahoo Finance, NewsAPI, Finnhub, Google Cloud APIs, OpenWeather API
Robotics & Hardware:	NVIDIA Jetson, Jetson Orin Nano, LiDAR, ZED Stereo Cameras, IMUs, Sensor Fusion, Raspberry Pi, Arduino, Drones, Embedded Systems
Cybersecurity:	Network Security, Ethical Hacking, Vulnerability Scanning, Penetration Testing, Cryptography, Secure API Integration, Cloud Security Principles
Data & Visualization:	Pandas, NumPy, Matplotlib, Seaborn, Plotly, Chart.js, Recharts, WordCloud, Power BI, Tableau, Excel Analytics, Interactive Dashboards
Systems & Terminal Skills:	Linux (Ubuntu), Embedded Linux, NVIDIA Jetson Orin Nano, JetPack SDK, ROS 2 Humble, colcon, CMake, Docker (ARM64), CUDA setup, SSH/SCP, systemctl, journalctl, OS flashing, system debugging

Experience

Co-Founder & Software Engineer – Stock Crusher (GenAI Startup) Summer 2025 – Present

- Built and deployed a production-ready multi-AI trading platform integrating 8+ real-time market APIs, using a weighted consensus algorithm across Gemini, Perplexity, and OpenAI to generate BUY/SELL/HOLD signals, delivered via Flask APIs and a React + Tailwind dashboard with resilient cloud deployment.

Co-Founder & Software Engineer – MealMuse (AI-Powered iOS Startup — Live on App Store) Fall 2025 – Present

- Launched a production-ready AI-powered iOS app using SwiftUI and a Node.js (TypeScript, Fastify) backend, enabling personalized recipe generation via text, voice, and image inputs, and built a scalable OpenAI GPT-4o-mini infrastructure with caching and secure authentication, reducing LLM calls by 80–90%.

Graduate Teaching Assistant – University of the Pacific (Advisor: Dr.Sethuraman Kuruvimalai) *Spring 2026 - Present*

- Assisted in ANLT-293B: Introduction to Security Analytics, supporting hands-on instruction in Linux, virtualization, Splunk SIEM, threat intelligence, EDR, and SOC-based security investigations; created quizzes, graded assignments, guided lab sessions, and collaborated with the instructor to prepare course materials and technical notes.

Graduate Research Assistant – University of the Pacific (Advisor: Dr.Solomon Berhe)
Summer 2025 - Present

- Conducted large-scale sentiment trajectory research on 324+ Reddit discussions within the ReleaseTrain.io ecosystem, building a Python-based pipeline using VADER, REST APIs, and custom quality/reliability metrics to compare author vs. community sentiment dynamics, validated through human labeling, confusion matrices, and interactive visualizations.

Graduate Research Assistant – University of the Pacific (Advisor: Dr.Dongbin Lee)
Fall 2025

- Developing an AI-driven perception and control stack for the F1TENTH Autonomous Racing Car using Jetson Orin Nano and ROS 2, implementing computer vision and sensor fusion (OpenCV, PyTorch/TensorFlow, ZED SDK, LiDAR) for real-time lane detection, obstacle avoidance, and object tracking on embedded GPU platforms.

Graduate Research Assistant – University of the Pacific (Advisor: Dr. Pramod Gupta)
Spring 2026 - Present

- Developed MoodMirror, an AI-powered student emotional wellness tracking system using Next.js, FastAPI, and PostgreSQL, integrating GPT-4o-mini diary generation with a fine-tuned RoBERTa emotion classification model and interactive analytics to detect mood trends, behavioral patterns, emotional triggers, and personalized weekly insights.

Selected Projects & Research

Real-Time Social Media Sentiment & Toxicity Analysis System (NLP) *Fall 2025 - Present*

- Building a scalable NLP system analyzing 18K+ social media comments using transformer models (RoBERTa, BERTweet, BART) for sentiment, toxicity, and authenticity detection, achieving 90.23% sentiment accuracy.

End-to-End Multi-Database Weather Data Engineering Pipeline *Fall 2025*

- Built an end-to-end weather analytics pipeline for Stockton, CA using Open-Meteo API, MongoDB, ClickHouse, and Redis, implementing incremental ETL with metadata lineage tracking and an Express + Chart.js dashboard for real-time monthly insights.

LIMFADD: LLM-Enabled Instagram Multi-Class Fake Account Detection *Spring 2024*

- Developed LIMFADD, an LLM-augmented multi-class Instagram fake account detection dataset and deep learning model, enabling classification of real, spam, scam, and bot accounts with 97% accuracy and improved performance over existing state-of-the-art datasets.

Crop Monitoring and Maturity Detection for Plantation Crops *Fall 2023*

- Developed a deep learning–based crop maturity detection system using a custom CNN model that achieved over 86% accuracy in classifying plantation crop images captured by drones.

Pest Detection Using SVM *Fall 2022*

- Built an SVM-based pest detection system that preprocesses crop images and classifies infected vs. healthy tea leaves with high accuracy, enabling early pest identification for improved agricultural decision-making.

On-Tree Areca Nut Fruit Maturity Detection *Spring 2022*

- Developed a YOLOv5-based deep learning model integrated with DJI Mini SE drones to detect and classify areca nut maturity in complex backgrounds, optimizing harvest timing and improving yield estimation.

Conferences

IEEE ISTAS25 (International Symposium on Technology and Society) *Fall 2025*
Santa Clara University, CA
Presented the paper *"LIMFADD: LLM-enabled Instagram Multi-Class Fake Account Detection Dataset"*
Publication link: techRxiv