MOE MYAT AUNG

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EDUCATION

California Polytechnic State University, San Luis Obispo (Cal Poly)
Graduating December 2026 w/ **B. Sc Computer Science**
Major GPA: 3.8 | University Honors Program | Dean's List for all quarters

Coursework: Software Engineering, Operating Systems, Networked/Distributed/Parallel Computing, Databases, Algorithms, Systems Programming, Computer Organization, Object-oriented Programming, Data Structures

WORK EXPERIENCE

Cal Poly Computer Science Department, *Tutor* *Sep 2024 - Present*

- Provided 1-on-1 guidance on **Data Structures**, **Algorithms**, and coding projects to over **50 students** quarterly
- Facilitated **problem-solving strategies** and **debugging** tips for complex assignments

DormMe Application, *Internship* *Apr 2025 - Present*

- Implemented **vector search** using **Vertex AI** embeddings in **Firebase Functions** to replace bottlenecked GPT-based matching logic in a fast-paced early-stage startup environment, improving matching latency at scale as user count exceeded 200
- Tested secured **Google Cloud Run functions** using **Postman**, Identity Tokens, and service accounts to verify behavior and debug cloud-deployed logic
- Collaborated in a **3-person agile-style team** to architect and develop tool-using **AI Agents** with **Google ADK** and **Vertex AI Engine** for housing and roommate discovery, including tool orchestration, grounding, and session state design, while periodically **refactoring** shared modules for simplicity and maintainability
- Built a property-specific assistant agent using Google ADK integrated with **Google Places API** via the 'googlemaps' Python SDK to answer location-aware user queries about housing listings and neighborhoods, coordinating with the team on requirements during MVP and beta launches.
- Designed a backend interface that bootstraps agent session state from only 'user_id' and 'housing_id', querying data directly from **Typesense** to simplify frontend integration and centralize session logic on the backend, and implemented an LRU-cached client initialization to ensure a single reusable client instance, reducing connection overhead
- Introduced **Pydantic** to standardize Typesense document parsing and added schema validation against live collection definitions to prevent field mismatches, improving long-term code maintainability and integration

RESEARCH EXPERIENCE

Using Large Language Models to Analyze Memory | Dr. James Anthony, *Research Assistant* *Jan – June 2025*

- Contributed to codebase that produced graphs and visualizations using **Pandas**, **Numpy**, and **Matplotlib** to analyze spreadsheet-based data
- Produced heatmap visualizations of semantic similarities of each of **200 subject responses** against the official screenplay utilizing **Google's Universal Sentence Encoder** embeddings**,** revealing potential biases in memory recall
- Optimized **data loading and processing in Pandas** by caching spreadsheets, reducing repeated file reads and cutting total runtime by **~85%** (15 minutes → 3 minutes)
- Designed a quantifiable metric of accuracy for **Large Language Model** predictions against human labels, enabling objective accuracy evaluations and reproducible analysis

PROJECTS

Networking System Projects · GitHub *Apr – June 2025*

Python, TCP/UDP Sockets, File I/O, Protocol Design

- **P2P File Sharing System**: Built a peer-to-peer file sharing system over TCP with a custom protocol (Offer, Request, Transfer, Ack) and a tracker server for peer discovery
- **TCP Congestion Control over UDP**: Simulated TCP features (slow start, congestion avoidance, fast retransmit) over UDP with checksum-based error detection and RTT/cwnd visualizations
- Implemented chunked file transfer with acknowledgments, retransmissions, and performance metrics under varying packet loss conditions

SKILLS & CERTIFICATIONS

Programming Languages: Python, C, Go, Java, MySQL
Tools: Git, React, Postman, Typesense, Cloud Technologies: Google Cloud Platform (Vertex AI, Cloud Run)