

# Mateo Alado

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## SKILLS

- **Languages:** C/C++, Python, JavaScript, TypeScript, Java, Go, SQL, R
- **Frameworks:** REST APIs, React, Flask, Node.js, Tailwind
- **Developer Tools:** Git, Github, AWS, PyTorch, Docker, Supabase, MongoDB, Selenium, Pandas,
- **Core CS Concepts:** Software Engineering, DSA, OOP, APIs, Multithreading, AI/ML, Mobile Development

## PROFESSIONAL EXPERIENCE

### Machine Learning Research Intern

*California State University, East Bay*

**Hayward, CA**

January 2026 - Present

- Conducted research on optimization techniques for **long-context tokenization** in large language models, collaborating with a **3-faculty research team** to improve efficiency and scalability of extended context windows
- Designed and implemented a **GraphRAG**-based agent system, **reducing token usage by ~90%** and **achieving 2x faster latency** on 128k–256k token inputs compared to **GPT-4**

### Teaching Assistant (CS)

*California State University, East Bay*

**Hayward, CA**

August 2025 - Present

- Instructed and supported an on-site class of **50 students** in hands-on instruction in Data Structures and Algorithms
- Collaborated with instructors to achieve a **~20% increase in test performance compared to previous semesters**

### Open Source Freelance Software Engineer

*Self Employed*

**Remote**

August 2024 - Present

- Developed and contributed to **10+ public repositories** on CodeTriage and additional open source personal projects
- **Decreased development time by ~10%** while maintaining collaborative engineering and Agile development practices amongst a team of **20+ professional freelance engineers**

## PROJECTS AND ADDITIONAL EXPERIENCE

### User Login Data Encryption Engine (Python, Fernet, Symmetric Encryption, JSON, Cryptography)

- Engineered and deployed a **multi-layered symmetric encryption model** with Python and Fernet to ensure improved protection and privacy of local login data held on **100+ user devices**
- **Achieved a ~50% increase** in overall data privacy through doubly encrypted file contents and security measures

### Git Workflow Automation Tool (C, Bash, Git, Process Control, Embedded Systems, Automation)

- Built a Git automation tool to improve commit and repository workflows for a **12-person development team**
- Achieved a **23% reduction in commit and merge overhead** by automating manual Git workflow patterns

### Real-Time Learning Application (Java, Socket Programming, UI Design, Software Engineering, Software Architecture)

- Developed a **real-time education application** supporting up to **50+ concurrent clients** allowing users to generate and personalize course study materials based on learning style and course content
- **Reduced overall average latency to 1ms** by optimizing client-side and server-side interactions

### Full-Stack Outreach Platform and Developer Portfolio (HTML, CSS, JavaScript, EmailJS, GitHub, REST API)

- Designed a modern **full-stack web platform** with outreach to **1500+** industry professionals on LinkedIn and GitHub
- Integrated the EmailJS **REST API** to automate email responses resulting in a **35% increase in professional outreach**

## EDUCATION

### California State University, East Bay

*Bachelor of Science, Computer Science*

**December 2026**

*Dean's Honor List*

- **Relevant Coursework:** Advanced Data Structures and Algorithms, Object Oriented Design, Computer Architecture, Operating Systems, UNIX and Linux, Computer Networks, Software Engineering, Web Development, Mobile Programming, Automata and Computation, Discrete Mathematics, Linear Algebra, Statistics and Probability for Engineers