Kyi Lei Aye

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Education

University of California, Irvine — **Irvine, CA**
B.S in Computer Science, Specialization in Intelligent Systems | *GPA - 4.0* — Aug 2025 - May 2027

College of San Mateo — **San Mateo, CA**
A.S in Computer Science, Mathematics, Physics | *GPA - 3.94* — Aug 2022 - May 2025

Relevant Courses: Linear Algebra, Probability & Statistics, Object Oriented Programming, Data Structures & Algorithms, Computer Architecture, Algorithm Designs & Analysis, Information Retrieval, Intro to AI, Machine Learning Specialization.

Job Experience

Cadence Design Systems | Machine Learning Engineer Fellow — **Sept 2025 - Present**
- Developed an end-to-end preprocessing pipeline, including **tokenization** and **noise reduction**, for **48M+** Amazon product reviews using **NLTK** and **Pandas**, enhancing data quality for model training.
- Fine-tuned a **BERT-Base Cased model** on cleaned reviews with **Hugging Face Transformers** to extract actionable insights for products, achieving **87%** accuracy in multi-class sentiment analysis (positive, neutral, and negative).

Uber | Software Engineer Fellow — **Jan 2025 - Aug 2025**
- Integrated a real-time mobile object detection feature in an inventory app using **Tensorflow.js** and storing data in **Firebase**, reducing manual data entry workload by **20%** and enhancing user satisfaction and experience.
- Built and tested a **Retrieval Augmented Generation (RAG) pipeline** with **Pinecone** database and **Langchain** to upgrade AI-powered chatbot, improving response relevancy and accuracy rate by **35%**.

Stanford University School of Medicine | Machine Learning Research Intern — **Sept 2024 - Sept 2025**
- Fine-tuned a **BEiT-BERT** based pathology vision-language model on **~6K** image pairs with **Pytorch** and **knowledge distillation**, increasing model accuracy rate by **72%** in tissue classification in grayscale cancer microscopy image domain.
- Implemented a **UNI self-supervised image encoder pipeline** in **TensorFlow** with a **cosine similarity technique** for pixel-level cancer classification, achieving **70%** precision in identifying cancer areas in pathology images.

Microsoft Teals | Computer Science Teaching Assistant — **July 2024 - May 2025**
- Mentored **20+** K-12 students with AP computer science labs and tests, enhancing students' average test scores by **15%**.
- Delivered **1-1** and small group tutoring sessions, which increased students' assignment completion rate by **20%.**

Projects

Insight Bot | GitHub — **TypeScript | Python | NextJS | Anthropic API | Pinecone**
- Led a team of **4** to develop a full-stack **RAG**-powered web app, integrating a **Flask** backend with a **Next.js** frontend via **RESTful APIs** for real-time client-server communication.
- Used by **100+** students to build effective study habits with a personalized study planner assistant and reach learning goals.

Personal Finance Tracker | GitHub — **Python | Flask | OpenAI API | Pytest | PostgreSQL**
- Engineered an **OpenAI API**-powered chatbot with **PostgreSQL** to manage chat history and deliver real-time AI financial advice.
- Implemented secure user authentication with **Flask-Login, SQLAlchemy** and **Werkzeug** password hashing, ensuring data protection, privacy, and user trust.
- Developed a scalable **Pytest suite** to validate budget calculations and transaction handling logic, ensuring system reliability.

Research Publications & Awards

- Leveraging Computational Pathology AI for Non-invasive Optical Imaging Analysis Without Retraining | **Paper** — **Nov 2024**
- Won **3rd prize** in Physical & Computational Sciences at Stanford Undergrad Research Conference among **90+** researchers.
- Won **presentation award** in Computational & System Biology at Biomedical Research Conference out of **4200** researchers.

Leadership

Girls Who Code Chapter | San Mateo County | Vice President
- Grew club membership by **60+** through social media contents, flyers, tech speaker events, and club activities.
- Led group projects, increasing members' participation rate in projects by **30%** through effective progress tracking.

Technical Skills

Language/Frameworks: Python, Java, C, C++, SQL, HTML, CSS, Tensorflow.js, Node.js, React, Next.js, Langchain, Flask.
Developer Tools: VS Code, Git, GitHub, Google Colab, Jupyter Notebook, Hugging Face, Kaggle.
AI | ML Libraries: Pandas, Numpy, Matplotlib, NLTK, Scikit Learn, Tensorflow, Keras, Pytorch, Albumentation, Transformers.