

THOMAS YEOH

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Education

University of California, Irvine
Master of Computer Science

Expected: Dec 2026

University of California, Berkeley
B.S. Electrical Engineering and Computer Science

Graduated: May 2025

- Coursework: Data Structures, Algorithms, Computer Architecture, Optimization models, Discrete Mathematics, Probability Theory, Computer Vision, Computer Graphics, Machine Learning, Databases
- Activities & Awards: Cal Leadership Scholarship, Google Developers Club (VP of Strategy)

Skills

Python, Java, C++, HTML/CSS, JavaScript, React, Node.js, Kotlin, Linux, PyTorch, SQL, R, x86 Assembly, Scheme, Git

Experiences

Berkeley Operations & Behavioral Analytics Lab
Research Assistant

Berkeley, CA

Jan 2024 – May 2025

- Performed data analysis and manipulation using Pandas and NumPy on datasets to support empirical findings.
- Translated mathematical models into code, optimized the data pipeline, and sped up pre-computation by 44%.
- Actively involved in using HPC cluster computers, creating tutorials, and adding documentation for lab members.

Keysight Technologies
R&D Software Engineer Intern

Penang, Malaysia

May 2024 – August 2024

- Deployed and developed a text classification app for service orders with React, reducing analysis time by 25%.
- Built an end-to-end data pipeline with REST API and Flask to efficiently process over 120,000 data points daily.
- Utilized various libraries (Keras, Sklearn, Seaborn) for advanced data modeling and analysis on large datasets.
- Experimented with ML methods: XGBoost, SVM, K-means, logistic regression, and Facebook fastText.

Projects

RookieDB (Java, SQL)

- Implemented a SQLite-like (RDBMS) database using policies such as multi-granularity locking and ARIES recovery.
- Utilized data structures like B+ tree indices and join algorithms for efficient query execution.

Live Traffic Monitor (GCP, Docker, Streamlit)

- Deployed a web app via GCP Run and Docker to fetch snapshots of live traffic and store them in Cloud Storage.
- Analyzed and displayed congestion levels on a Streamlit app via OpenAI's vision API.

Image Denoising with U-Net and Diffusion Models (Python, PyTorch)

- Developed and trained a U-Net for single-step image denoising on noisy datasets.
- Implemented diffusion-based iterative denoising for enhanced noise removal in high-noise images.
- Visualized model performance across training epochs, including varying noise levels for quality analysis.

Automatic Image Stitching (Python)

- Developed an image stitching system using Harris corner detection and feature matching.
- Implemented 4-point RANSAC to compute homographies, producing panoramas from overlapping images.
- Automated mosaic generation based on Brown et al.'s research paper for accurate image alignment.