

Taha Shafiei

taha.shafiei@gmail.com ◦ tahashafiei.com ◦ github.com/tahashafiei ◦ linkedin.com/in/tahashafiei ◦ (949) 751-9649

Education

University of California, Santa Cruz

September 2024 - Present

Master of Science (M.S.) in Computer Science and Engineering

GPA: 3.65/4.0

Relevant Coursework: Artificial Intelligence, Machine Learning, Foundations of Modern Cryptography, Analysis of Algorithms, Computer Networks, Programming Languages, Computational Models

Thesis: DGP: Transferable Geometric GNN Potentials for dsDNA Dynamics

June 2026

Advisor: Razvan Marinescu, PhD.

University of California, Santa Cruz

September 2020 - August 2024

Bachelor of Science (B.S.) in Computer Science

Experience

Baskin School of Engineering at UCSC

Santa Cruz, CA

TA, Tutor for Programming Abstractions in Python, Technical Writing for Computer Science and Engineering January 2022 - March 2026

- Designed discussion section material for sections of 30+ students and facilitated lectures of over 200 students
- Supported the design of future material, lectures and homework, affecting 500+ students per quarter
- Hosted weekly office hours to support students with core concepts

Avitai Bio

Cupertino, CA

Infrastructure Engineer Intern

June 2023 - September 2023

- Implemented and maintained infrastructure for the development of a computational biology framework
- Containerized a CUDA-accelerated training platform for single-cell gene expression analysis
- Developed a Python data access layer for Saccharomyces Genome Database (SGD) phenotype dataset, supporting column-aliased querying, multi-column filtering with row selection, and unique value aggregation

Projects

Opentypist

github.com/tahashafiei/Opentypist

- Built a privacy-first macOS menu bar app providing on-device AI ghost-text autocomplete using Apple MLX for in-process inference on Apple Silicon, with Ollama HTTP fallback
- Implemented global keystroke interception via CGEventTap and real-time context extraction via AXUIElement Accessibility API
- Architected a debounced inference pipeline using Swift structured concurrency, cancelling in-flight LLM tasks on each new keystroke
- Rendered ghost-text, in under 150ms, as a borderless, non-activating, click-through NSPanel overlay positioned at the cursor
- Engineered per-app suppression system and Tab/backtick accept flow, inserting accepted completions back into host applications via Accessibility API

Full-Stack Messaging Platform (Slack Clone)

CSE 186 Web Development

- Designed and built a 3-tier Slack-style SPA using React 18, Node.js/Express, and PostgreSQL
- Developed React components with Material-UI with global state via Context API, persistent session tracking, and real-time message composition
- Enforced API contract validation using OpenAPI 3.0.3 with express-openapi-validator
- Containerized database layer using Docker Compose, with automated schema migration and seed data initialization

CNN for sign language translation utilizing the Google Isolated Sign Language Dataset

CSE 144 Applied Machine Learning

- Trained a neural network in Pytorch to classify ASL gestures into English words, utilizing data from the Google Isolated Sign Language Recognition Kaggle competition
- Built a preprocessing pipeline to extract key landmark features from parquet-formatted motion capture data, reducing input dimensionality to compact feature vectors
- Converted trained PyTorch model to TensorFlow Lite via ONNX for lightweight deployment

Skills

Programming Languages

- C/C++, Python, Swift, Bash, MIPS Assembly, HTML/CSS

Technologies

- Pytorch, NumPy, Pandas, Git, Docker, PostgreSQL, React, GNU/Linux, OpenAPI, Redis, MLX, SwiftUI, LLM/GenAI, Hugging Face, Transformers, Graph Neural Networks, CI/CD (GitHub Actions) Pipelines, Testing(pytest/Jest)