

EDUCATION

University of California, Berkeley | Intended Graduation: May 2025

GPA: 3.82/4.0

B.A. Computer Science, Physics minor

- Relevant Coursework: Data Structures, Machine Structures, Efficient Algorithms, Multivariable Calculus, Discrete Math, Probability Theory, Thermodynamics, Quantum Mechanics, Linear Algebra, Differential Equations, Computer Security

PROFESSIONAL EXPERIENCE

Climate Dynamics at Berkeley (Boos Group) | Berkeley, CA

September 2023 - Present

Undergraduate Researcher

- Analyzing extreme precipitation data from weather stations in Cameroon utilizing Xarray, TAHMO API and NumPy
- Synthesizing and comparing satellite-derived precipitation estimates and a global gauge-based estimation with station data

UC Berkeley Department of EECS | Berkeley, CA

August 2023 - Present

Undergraduate Course Staff – CS61C – Machine Structures

- Aiding a 750-student class during Office Hours and forums, addressing questions on C, RISC-V, circuitry, and parallelism
- Dedicating 8+ hours a week to creating course materials such as exam questions and grading exams and assignments

UC Berkeley Department of EECS | Berkeley, CA

January 2022 – May 2022

Academic Intern – CS61A

- Assisted 30+ students in solving introductory python, Scheme, and SQL problems in weekly lab sections
- Produced and taught 15-minute lectures given to clarify student's understanding of concepts covered in the previous week

nth Solutions | Exton, PA

June 2020 – June 2021

Data Analyst Intern

- Developed data conversion scripts for analyzing harmonic time series in MATLAB, python, Octave and R.
- Constructed regression models for comparing on-vehicle tire balancing data using TensorFlow and PyTorch
- Utilized low pass filtering toolboxes in Python to process on-vehicle tire data
- Developed a quaternion to Euler angle conversion script for sensor fusion of accelerometer and gyroscope data

PROJECTS

Ketchup

- Developing a Quality-Of-Life MacOS client that scrapes iMessage data and performs topical analysis and summarization
- Utilized TauriApp, Next.js for frontend; employed LangChain and leveraged the power of GPT-4 LLM for topic summarization; created custom scraping solution to retrieve data from iMessage SQLite database

NetflixGPT

- Developing a Netflix AI chatbot companion with peers that provides spoiler-free Q&A using OpenAI's LLMs
- Built a FastAPI RESTful backend using LangChain for multi-stage prompting, pinecone for storing plot summary embeddings, and a custom web-scraping algorithm using MediaWiki framework and SerpAPI

Gitlet

- Developed a file version-control system inspired by git capable of initializing a directory, adding files to stage, commit changes/files to directory, printing a log of commits, create branches, switch between branches and merge branches
- Utilized various data structures and techniques such as Hashmaps, Treemaps, Breadth-First Search for each command.

Convolutions

- Created and optimized a matrix convolution algorithm in C utilizing SIMD, OpenMP and Open MPI parallelism

Scheme Interpreter

- Developed interpreter for Scheme language through Python evaluating both special forms and procedure calls

EXTRACURRICULAR ACTIVITIES

Associated Students of UC, Office of the Chief Technology Officer (ASUC OCTO) | Berkeley, CA

February 2023 – Present

Developer

- Working with a team to create a platform for student organizations to communicate with the Student Association (ASUC), post vital information about their clubs, and streamline the process to request funding and filling logistical forms.

UC Berkeley Department of Music | Berkeley, CA

July 2022 – Present

Instructor – “Playing By Ear” Class

- Co-teaching a student-facilitated class for 3+ semesters, instructing 25 students on the art of playing music by ear
- Producing and teaching lectures on music theory, ear training, improvisation, and fundamental piano skills

SKILLS & INTERESTS

Technical Skills: Java, Python, C, SQL, NumPy, Matplotlib, pandas, MATLAB, Scheme, SciPy, REST API, Assembly (RISC-V), HTML/CSS, Node.js, React.js, LangChain, Next.js

Interests: Meteorology, Geography, Piano, Music Transposition, Football, Skiing, Lacrosse, Infrastructure, Airplanes, Architecture