Alexander Sun

github.com/llejj Portfolio Website 650-656-0614 alex.sun@berkeley.edu

EDUCATION

UC Berkeley June 2025
Computer Science + Applied Math (Double Major) *Current GPA: 4.0/4.0*
UC Davis (Transferred to Berkeley) September 2022 – June 2023
Computer Science *GPA: 4.0/4.0*
Menlo Atherton High School June 2022
GPA: 4.34/4.0

RELEVANT COURSEWORK

Math: Measure-Theoretic Probability (Graduate Level), Topology and Analysis (Graduate Level), Stochastic Processes, Real Analysis, Complex Analysis, Abstract Algebra, Applied Linear Algebra
Computer Science: Intro to Programming, Data Structures, Machine Structures, Object-Oriented Programming, Theory of Computation
Econ: Game Theory, Microeconomics, Macroeconomics

SKILLS

Languages: C/C++, Java, Python, SQL, HTML, CSS
Tools: Git/GitHub, Unix Shell, MATLAB, LaTeX

PERSONAL PROJECTS

ChatGPT for Translation | *Python* August 2023
- Wrote a script to translate text using the ChatGPT API
- Translated a few novels to English with much higher quality than Google Translate

HMM Speech Recognition | *Python* May 2023
- Implemented a Hierarchical Hidden Markov Model
- Designed a Hierarchical Hidden Markov Model for speech recognition using the TIMIT Speech Corpus

HMM Stocks | *Python* April 2023
- Used the HMMLearn library to train a Hidden Markov Model on historical stock data
- With two hidden states, model seemed to identify higher vs. lower volatility

CLASS PROJECTS

Gitlet | *Java* July 2023
- Implemented Git in Java from scratch
- Supported commands: init, add, commit, rm, log, global-log, find, status, restore, branch, switch, rm-branch, reset, merge

RISC-V CPU | *N/A* July 2023
- Using Logisim software, designed a CPU datapath for 32-bit RISC-V machine code
- Includes 2-stage pipeline

EXPERIENCE

Directed Reading Program March 2023 – June 2023
- Met weekly with a UC Davis graduate student to discuss readings on Measure Theory and Hidden Markov Models

Ace Tutors at UC Davis September 2022 – December 2022
- Planned one-on-one sessions with students taking introductory calculus
- Created notes, worksheets, and practice exams