Brendan Lee

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EDUCATION

California Institute of Technology, Pasadena, CA ***Class of 2028***

Computer Science

Computer Science Club, ML/AI Club, Quant Club, Poker Club, NCAA Soccer

ACT: 36

Awards: 3x AIME Qualifier; ACSL Silver Medal; USNCO 1st Place Team

Relevant Coursework: CS 2 Data Structures/Algorithms; Ma 1B Linear Algebra; Ma 1C Multivariable Calc; Ma 3 Probability and Statistics; ACM 11 (MATLAB); Python in ML/Data Science

SKILLS

Python, C/C++, Java, MATLAB, Data Science/Machine Learning

EXPERIENCE

Hummingbird Tek, Irvine, CA — *Software Engineer* **June 2023-August 2023**

- Generated electricity rates based on appliance and time of year using internet and personal data.
- Used C++ to store data and simulate a household electricity bill.
- Produced graphs showing energy usage in Python and Matplotlib.

UC Irvine NSF-Simons Center for Multiscale Cell Fate Research, Irvine, CA — *Researcher* **June 2022 - August 2022**

- Applied negative binomial distribution to map spatial transcriptomic and single-cell data.
- Used Ubuntu/Linux to run probability software and find gene expressions of different regions of the brain.
- Modeled differential equations and biological populations in MATLAB.

MiRcore, Ann Arbor, MI (Online) — *Researcher* **August 2022 - March 2024**

- Found datasets of gene expressions comparing patients with and without non-hodgkin's lymphoma and multiple sclerosis.
- Used R to analyze datasets and create volcano/box plots comparing gene expressions of those with and without the disease.
- Employed String to find relationships between most significant genes.

Projects

Python Stock Web Scraper *https://github.com/blee1616/PythonWebScraper*

Web scraped to find articles related to user's stock; Deepseek API to give predictions for stock.

Java Blockchain Simulator *https://github.com/blee1616/Blockchain*

Simulating blockchain procedures using Java (hash functions for addresses, mining).

Python Machine Learning *https://github.com/blee1616/ML*

Tree regressors, random forest, supervised/reinforcement learning, Q-Bandit, neural networks.

C++ Competitive Coding *https://github.com/blee1616/CP*

Competitive coding problems from CSES, CodeForces, USACO, and Advent of Code.

Task Scheduler (Work in Progress) *https://github.com/blee1616/Scheduler*

Dart/Flutter; Firebase backend; IOS/Android/Windows/Mac; Allows users to schedule and write notes for future tasks.