Alexander Lio

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EDUCATION

University of California, Santa Cruz **Santa Cruz, CA**
Bachelor of Science in Engineering in Computer Science *Expected 2026*
Cumulative GPA: 3.53/4.0, College Scholar
Coursework: Artificial Intelligence, Probability and Statistics, Machine Learning Basics, Data Structures and Algorithms, Computer Architecture, Principles of Computer Systems Design

EXPERIENCE

Baskin Engineering: CSE 101, Data Structures and Algorithms **Santa Cruz, CA**
Individual Tutor and Grader *January – April 2024*

- Led office hours as an outlet for students to debug and understand abstract data structures and algorithms
- Worked with C/C++ on Unix VMs and Docker Containers/Images for testing scripts and runtime constraints
- Taught derivation of Big-Oh analysis mathematically through limits and conceptually with PAs
- Integrated CI/CD on GitLab to teach branch control and handle grading for the test scripts.

Baskin Engineering: CSE 16, Discrete Mathematics **Santa Cruz, CA**
Individual Tutor and Grader *April - June 2024*

- Held office hours for students to grasp topics of logical and discrete based reasoning, and logical proofs.
- Assisted students with basic programming to replicate simple combinatorics and permutations for labs.
- Evaluated and graded student work, offering detailed comments to improve their understanding and performance.
- Created practice problems and study guides to reinforce key concepts and aid students in preparation for exams

ACTIVITIES/PROJECTS

Code For Fun **Mountain View, CA**
Volunteer Intern/TA *July - September 2022*

- Led group instruction, compiling low-level programming abstractions of computers, code, and fundamentals
- Created interactive exercises and projects through Scratch and Minecraft to stimulate learning.
- Communicated the foundations of programming, incorporating basic skills into engaging team-building activities.
- Inspired innovation within young minds through demonstration and explanation in 100+ kids and teens.

Inspirit AI **Remote**
Student Intern *July - August 2021*

- Implemented Python's scikit-learn, numpy, matplotlib, and pandas libraries to construct basic KNN, CNN models
- Worked with a basic skin cancer detection, classification type Convolutional Neural Network with students and mentors proving an accuracy of 70% and an AUC of 93.7% in its classification.
- Assisted in cleaning datasets, and applied data augmentation to enhance the model's generalization capabilities.
- Compiled and presented comprehensive reports and visualizations of the model's performance metrics.
- Showcased the project's outcomes and areas for potential improvement to peers and mentors.

SKILLS

Programming Languages: Python, C/C++, Java, HTML, Bash, RISC-V Assembly
Frameworks/Tools: Git, Linux, Docker, Bazel, Jenkins, Shell Script