Leon Lin

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EDUCATION

University of California, Santa Cruz Expected Graduation: June 2023
B.S., Computer Science B.A., Computational Mathematics Major GPA: 4.00/4.00

TECHNICAL SKILLS

- Python, PyTorch, Tensorflow
- Java, C/C++, MATLAB, MIPS Assembly
- HTML/CSS, JavaScript, Node.js, Angular

EXPERIENCE

Tech4Good Lab, UCSC **Sept 2020 - Present**
Undergraduate Research Assistant
- Worked in a team of eight to build an scheduling web application called "Timely" in angular
- Designed and implemented user interface that allows users to modify it's schedule in HTML, CSS, and TypeScript.
- Conducted pilot study to analyze feasibility and design of the web application.

NeuroTech Club, UCSC **June 2020 - Present**
Machine Learning Team Captain
- Designed a neural interface that allows users to interact internally without opening their mouth.
- Held weekly meetings to discuss progress and solve issues in model architecture.
- Collected electromyography data and preprocessed the dataset using principal component analysis.
- Trained a convolutional neural network that identifies common words in Tensorflow.

Computer Science and Engineering Department, UCSC **Jan 2020 - June 2020**
Tutor
- Course: 1 quarter of Programming abstractions in Python
- Located defects in un-authored code and explained to students why their bugs exist.
- Discussed programming practices and debugging strategies with students.

Academic Excellence Program, UCSC **Sept 2020 - Present**
Co-Leader/Peer Mentor
- Co-leaded course: discrete mathematics (x1)
- Held 3 hours of problem solving session and 5 hours of peer mentoring weekly

Learning and Support Services, UCSC **March 2020 - June 2020**
MSI Learning Assistant
- Held 4 modified supplemental instruction sessions and 2 small group tutoring sessions for each week
- Attended weekly meetings with faculties and the teaching team of the course
- Maintained an average attendance of 40 students weekly

PROJECTS

Scheme Interpreter (Python): an interpreter for a subset of the Scheme language build up using Python. The interpreter utilizes lexical analysis and token to interpret scheme language as a tree recursive program.

Alter Ego (Python/Tensorflow): A neural interface that allows humans to converse with machines voiceless. Built up using electromyography data from a headset of eight electrodes and a convolutional neural network.

Spam Classifier (MATLAB): Preprocessed the spam email data set and chose the most frequently appeared words as the training features. Trained a SVM with kernels that identifies the spams with a 98.8% accuracy on the test training set.

Sudoku (Python): Implemented backtracking algorithm that solves sudoku puzzles and a sudoku generator that randomly generates puzzles with different difficulty scores.

Timely (Angular): A scheduling website that allows users to ask for schedules of other people and find common time among everyone, making collaboration planning easier. Built up using Angular framework with firebase for data storing.