Sander (Lanbo) SHI

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EDUCATION

CARNEGIE MELLON UNIVERSITY
B.S. Computer Science
Minor in Mathematics
Class of 2019

COURSEWORK

COMPUTER SCIENCE
- Machine Learning*
- Algorithm Design & Analysis*
- Parallel Algorithms
- Computer Systems
- Computer Vision
- Functional Programming
- Theoretical Ideas in CS
- Imperative Programming
- Practical Ideas in CS

(* : In progress)

MATHEMATICS
- Concepts of Math
- Calculus in 3D
- Matrix Algebra
- Probability Theory

SKILLS

COMPUTER
Languages
- Python
- SML
- C/C++
- Matlab/Octave
- Javascript/Typescript

Web Development
- HTML5, CSS3 & SCSS
- Angular 2
- Meteor
- MongoDB

Tools
- LaTeX
- Git
- Linux (avid Arch Linux user)

NATURAL LANGUAGES
- English
- Mandarin

WORK EXPERIENCE

SCHÖDINGER | Software Engineering Intern
May 2017 - August 2017 | New York, NY, USA
- Developing a protein sequence viewer with Python and Qt5.
- Reimplemented an important functionality which reduced the code base by 10%.

OPENCHIRP | Research Assistant
January 2017 - May 2017 | Pittsburgh, PA, USA

- Developed the website and dashboard for an IoT device using Angular.
- Wrote code to send HTTP requests to and process responses from a REST API.

TUXLAB | Software Engineering Intern
May 2016 - August 2016 | Pittsburgh, PA, USA
- Developed a tool using Angular Meteor, that will be used to teach Linux based courses.
- Integrated a web terminal into the web app.

PROJECTS

CONVOLUTIONAL NEURAL NETWORK
Spring 2017 | Course Project | Computer Vision
- Implemented a convolutional neural network with the **LeNet** architecture.
- Achieved a **97%** training accuracy on handwritten digits.

SEARCHING ALGORITHM
Spring 2017 | Team Project | Algorithms with a Purpose Competition
- Designed and implemented a searching algorithm to find resources in a 2D grid and return them back to base within a certain number of steps.
- **1st place for 4 out of 5 rounds**.

CMU SUMMIT WEBSITE
Fall 2016 | CMU Club Website
- Designed and developed the club website of CMU Summit, which helped students browse and sign up for courses. (https://www.cmu.edu/summit)

LOCAL WEATHER DATA COLLECTOR
Spring 2016 | Team Project | CMU Build-18
- Built a module using Photon boards and customized PCB boards that collected weather data and sent the data to a website during CMU Build 18.
- Visualized data on website using popular chart and graph APIs.

EXTRACURRICULAR ACTIVITIES

CMU Sahara | 2017 - Present
Member of the CMU Sahara dance group. Participated in 3 dances for a **competition**.
Music | 2001 - Present
Have been playing the piano since 2001 and the guitar for two years.
Public Forum Debate | 2012 - 2015
Went to four debate tournaments around China, and won a quarter finalist prize along with two best speaker prizes.