

# Sander Lanbo SHI

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## EDUCATION

CARNEGIE MELLON  
UNIVERSITY  
B.S. COMPUTER SCIENCE  
MINOR IN MATHEMATICS  
Class of 2019

## COURSEWORK

### COMPUTER SCIENCE

- Computer Vision
- Machine Learning
- Algorithm Design & Analysis
- Data Science \*
- Complexity Theory \*
- Parallel Algorithms
- Computer Systems
- Theoretical Ideas in CS

### MATHEMATICS

- Real Analysis \*
- Calculus in 3D
- Matrix Algebra
- Discrete Math
- Probability Theory

(\* : In progress)

## SKILLS

### COMPUTER

Languages

- Python • SML • C/C++ •
- Matlab/Octave •
- Javascript/Typescript • Java

Technologies

- HTML5, CSS3 & SCSS •
- Angular • Meteor • Android
- Studio • Qt5, PyQt5 •  $\LaTeX$  •
- Git • Linux (avid Arch Linux
- user)

### NATURAL LANGUAGES

- English (Native/Bilingual)
- Mandarin (Native/Bilingual)
- French (Elementary)

## WORK EXPERIENCE

**HULU** | INCOMING SOFTWARE ENGINEERING INTERN      Seattle, WA | Summer 2018

- Will be a software engineering intern on the client data metrics team.

**SCHRÖDINGER** | SOFTWARE ENGINEERING INTERN      New York, NY | Summer 2017

- Implemented features for a cross-platform protein sequence viewer in Python & Qt5.
- Improved synchronization between QtWidgets and reduced the code base by 10%.

**OPENCHIRP** | SOFTWARE ENGINEER (PART-TIME)      Pittsburgh, PA | Spring, Fall 2017

- Developed a management framework for Low-Power WAN using Angular.
- Created a dashboard that interacted with a REST API.
- Integrated a map into the webapp that displays live locations of devices.

**TUXLAB** | SOFTWARE ENGINEERING INTERN      Pittsburgh, PA | Summer 2016

- Developed a framework for creating interactive Linux courses using Angular Meteor.
- Integrated a web terminal (tty.js) into the web app.

## PROJECTS

### DEEP NEURAL NETWORK PARTITIONING

Spring 2018 | Research Project | Machine Learning

- Working on partitioning neural networks across devices to lower energy consumption.

### HANDWRITTEN DIGIT CLASSIFIER

Spring 2017 | Course Project | Computer Vision

- Implemented a CNN with the LeNet architecture and achieved a 97% test accuracy.

### GRIDWORLD RESOURCE COLLECTION AGENT

Spring 2017 | Team Project | Algorithms with a Purpose Competition

- Designed a searching algorithm to find resources in a 2D grid and return them back to base within a certain number of steps. Won 1st place for 4 out of 5 rounds.

### CMU STUDENT ORGANIZATION WEBSITE

Fall 2016 | CMU Student Organization

- Designed and developed the club website of CMU Summit, which helped students browse and sign up for courses. (<https://www.cmu.edu/summit>)

## EXTRACURRICULAR ACTIVITIES

CMU Sahara | 2017 - Present

Member of the CMU Sahara dance group. Participated in multiple competitions.

Music | 2001 - Present

Play, compose and improvise on the piano with classical and Jazz music.

Public Forum Debate | 2012 - 2015

Went to four debate tournaments, won a quarter finalist prize and two best speaker prizes.