

# Sander Lanbo SHI

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github.com/sandersshihacker

## EDUCATION

### CARNEGIE MELLON UNIVERSITY

B.S. COMPUTER SCIENCE  
MINOR IN MATHEMATICS  
Class of 2019 | Dean's List

## COURSEWORK

### COMPUTER SCIENCE

Distributed Systems  
Natural Language Processing  
Computer Vision  
Machine Learning  
Algorithm Design & Analysis  
Data Science  
Complexity Theory (TA)  
Parallel Algorithms  
Computer Systems  
Theoretical Ideas in CS  
Functional Programming

### MATHEMATICS

Real Analysis  
Calculus in 3D  
Matrix Algebra  
Discrete Math  
Probability Theory  
Set Theory  
Combinatorics

## SKILLS

### COMPUTER

Languages  
Python • Java • Go  
Javascript/Typescript

### Technologies

Angular • Scikit-Learn  
Keras • Spark • Hadoop  
Neo4j •  $\LaTeX$  • Git • Linux (avid  
Arch Linux user) • Unix

### NATURAL LANGUAGES

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

## WORK EXPERIENCE

### HULU | SOFTWARE DEVELOPER

Seattle, WA | July 2019 - Current

- Currently on the Artoo team at Hulu!

### CARNEGIE MELLON UNIV. | TEACHING ASSISTANT

Pittsburgh, PA | Fall 2018

- Held office hours/exam review sessions and graded for Complexity Theory.

### HULU | SOFTWARE ENGINEERING INTERN

Seattle, WA | Summer 2018

- Designed a graph model and wrote a Spark job to populate a graph database for user path analysis. Deployed on Docker containers on a cluster of servers.
- Created RESTful API with Express and Typescript to query Neo4j graph database.

### 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 devices using Angular.
- Created a dashboard that interacted with the devices using a REST API.

### 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

### YELP RATING PREDICTION

Group Project | Spring 2018

- Lead a team of 3 to query, parse and analyse restaurant data, then train on ML models.

### MIDI CLASSIFICATION TUTORIAL

Data Science Course Project | Spring 2018

- Created a tutorial that went through parsing midi data, extracting features and training on different ML models (ANN, SVM). 75% test accuracy over 15 classes.

### HANDWRITTEN DIGIT CLASSIFIER

CV Course Project | Spring 2017

- Implemented a Convolutional Neural Network with the LeNet architecture.
- Trained network on handwritten digits and achieved a 97% test accuracy.

### WEB DEVELOPMENT

Hobby | 2012 - Present

- Designed and developed over 10 websites/web apps, including a CMU student org website (<https://www.cmu.edu/summit>), my personal website, a miniature social networking site, and many more.

## EXTRACURRICULAR ACTIVITIES

Student Organizations | 2015 - 2018 | Was a member of the Archery Club, Parkour Club, and CMU Sahara (Bollywood Dance Team). Performed in dance competitions.

Music | 2001 - Present | Play, compose and improvise on the piano, saxophone and trumpet with classical and Jazz music. Trying to learn as many instruments as I can.