

# Sander Lanbo SHI

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## EDUCATION

### CARNEGIE MELLON UNIVERSITY

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

## COURSEWORK

### COMPUTER SCIENCE

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

### MATHEMATICS

Real Analysis  
Matrix Algebra  
Discrete Math  
Probability Theory  
Set Theory  
Combinatorics

## SKILLS

### COMPUTER

Languages  
C++ • Python • Java •  
Javascript/Typescript

### Technologies

Git • Linux (avid Arch Linux user) • GN (build system) •  
Angular • Scikit-Learn  
Keras •  $\LaTeX$  • Flutter

### NATURAL LANGUAGES

English (Native/Bilingual)  
Mandarin (Native/Bilingual)  
French (Elementary)  
Russian (Coming soon...)

## WORK EXPERIENCE

### HULU (DISNEY STREAMING SERVICES) | SDE

 Seattle, WA | July 2019 - Present

- Developing a WebKit-based cross-platform browser engine on the platform team.
- Worked on the porting layer and OS abstraction for Linux, Windows, Mac OS and UWP.
- Took ownership over platform integrations such as voice control and native keyboards.
- Designed and implemented a memory tagging system and a memory pressure handler.
- Deployed app to over **7 million** unique devices ranging from Fire TV to Xbox One.

### 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 (Neo4j) for user path analysis. Deployed on Docker containers on a cluster of servers.

### 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 system for Low-Power WAN devices using Angular.
- Helped develop and support a REST API that interacted with devices.

## PROJECTS

### RECIPE RECOMMENDATION APP

 Entrepreneurship competition | Spring 2021

- Built a cross-platform mobile app to recommend recipes using Flutter and Firebase.

### YELP RATING PREDICTION

 Group Project | Spring 2018

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

### MUSIC GENRE CLASSIFICATION

 Personal Project | Spring 2018

- Parsed midi data, extracted features and trained on ML models (ANN, SVM).
- 75% test accuracy over 15 classes. **12 stars** on GitHub.

### WEB DEVELOPMENT

 Hobby | 2012 - Present

- Designed and developed over 20 websites/web apps, using stacks and frameworks ranging from MEAN and MERN to Meteor, Django and Jekyll.

## EXTRACURRICULAR ACTIVITIES

Student Orgs | 2015 - 2018 | Archery Club, Parkour Club, and Bollywood Dance Team.

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

Volunteering | 2019 - Present | Tutoring @ **Ada Developers Academy**, teaching gender diverse communities computer science and software engineering.