

# Allen Liu

Greater New York Area

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## EDUCATION

### Carnegie Mellon University

Bachelor of Science in Computer Science • Minor in Robotics • GPA 3.5

Pittsburgh, PA

September 2018 - May 2022

**Relevant Courses:** Distributed Systems, Principles of Software Construction, Algorithm Design and Analysis, Software Foundations of Security and Privacy, Robot Kinematics and Dynamics, Introduction to Machine Learning

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## EXPERIENCE

### Uber

Seattle, WA (Remote)

Software Engineer Intern (Cadence Team)

May 2021 - August 2021

- Developed an alternative config system for open source Cadence customers that resolves many of the pain points with the current file based system such as file synchronization between hosts of a Cadence cluster.
- Responsible for the project design, database schema, and end to end implementation.
- Written in Go with Cassandra support and landed to the master branch of Cadence repo for open source customers to use (<https://git.io/J0k8m>).

### Amazon Web Services

Seattle, WA (Remote)

Software Development Engineer Intern (CloudFormation Team)

June 2020 - August 2020

- Developed a query engine for customers to build complex queries using GraphQL against their CloudFormation data in order to reduce the number of API calls and client-side computation currently required for queries.
- Responsible for the project design, database and GraphQL schemas, and end to end implementation.
- Written in Java and built with various AWS services including AppSync, Lambda, DynamoDB, and DocumentDB.

### Eberly Center (at Carnegie Mellon University)

Pittsburgh, PA

Research Assistant

November 2019 - April 2020

- Applied machine learning to analyze classroom audio data and generate useful metrics for professors to better understand their class dynamic and facilitate learning.
  - Extracted and analyzed various audio metrics (RMS, peak levels, zero-crossing rate, SNR, etc.) via Librosa to determine a set of viable features to discriminate between human speech, background noise, and silence.
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## SKILLS

**Programming Languages** Java, Python, Go, C, Standard ML, Javascript, HTML, CSS

**Frameworks and Technologies** AWS, GraphQL, Cadence, MongoDB, Cassandra, Mockito, Gomock, React, Node.js

**Miscellaneous** CAD, 3D Printing, Arduino, Raspberry Pi, PCB Design, Machine Shop Training

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## PROJECTS

**News Cloud (PennApps 2019 Submission)** - Chrome extension that overrides the new tab page with a word cloud automatically generated with trending phrases scrapped from various news sites.

- Written in Python (for web scraping and natural language processing) and Javascript (for front end and word cloud generation logic) using Flask.

for more details and other projects, please check out [aliuliu121.github.io](https://github.com/aliuliu121)

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## HONORS

**MedHacks 2020:** 1st Place in Patient Adherence and Quality Care during a Global Pandemic Track

**PennApps 2020:** Winner of Best Use of Google Cloud: COVID-19 Hackathon Fund