

# CHARLEY ZHAO

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## EDUCATION

**Carnegie Mellon University** – Pittsburgh, PA  
**Bachelor of Science in Information Systems**, Class of 2021

- Minor in Computer Science
- Dean's List, Fall 2017 and Spring 2018

**Lexington High School** – Lexington, MA

- Honor Roll for 4 years, Class of 2017

## EXPERIENCES

**BJ's Wholesale Club** – Westborough, MA *Jun 2019 – Present*  
**Software Engineer/Data Scientist Intern**

- Integrated into agile sprints for the Personalization Engine, a promotional offer assigning tool driving \$200M+ sales annually.
- Developing a production-level quality assurance test and unit test using Python, PySpark, and Pandas for club member data stored in AWS S3.
- Performing club member queries and executing regression and unit tests on Hadoop clusters using AWS EMR.

**Carnegie Mellon University** – Pittsburgh, PA *Jan 2019 – Present*  
**TA for 67-250: The Information Systems Milieu**

- Instruct office hours for 90 students on case analyses, web development, and database development.
- Manage course administration by grading homework, labs, and exams.

**Cell Signaling Technology** – Danvers, MA *Jun 2018 – Aug 2018*  
**Information Technology Intern**

- Programmed a Tableau web data connector in HTML and JavaScript using Tableau SDK for importing JSON and XML data
- Built relational databases to analyze metrics of 550+ Mac devices.
- Monitored and processed 30+ new hires on Microsoft Active Directory for syncing sign-ins with other software apps.

## PROJECTS

**A&B Bakery Web Application** *Feb – May 2019*  
**67-272 Project**

- Created and designed a full-stack web app in Ruby on Rails using MVC architecture with a SQLite database.
- Built a RESTful API to update customer info and read order details.

**C0 Virtual Machine** *Dec 2018*  
**15-122 Project**

- Implemented a VM in C modeled after the LLVM that performs low-level data and memory manipulation to execute programs written in C0, a CMU-created subset of C that is augmented with safety contracts.

**Venmo Mock Database Design** *Dec 2018*  
**67-262 Project**

- Created a mock Venmo database in PostgreSQL and wrote Python queries using Psycopg that realize core Venmo use cases.

**File Compressor and Uncompressor** *Nov 2018*  
**15-122 Project**

- Developed a program in C that uses Huffman trees to encode bits from text or image files into space-efficient binary codes, and decode the binary codes into the original bits.

## SKILLS

### Operating Systems:

MacOS, Windows 10,  
Unix/Linux

### Programming Languages/ Frameworks:

Python, C, Ruby on Rails, R,  
SQL, HTML, CSS, JavaScript,  
PySpark, Pandas, VueJS

### Software:

SQLite, PostgreSQL, MySQL,  
Git, Gitlab, Bitbucket, Jira,  
Confluence, AWS EMR, AWS  
S3, WinSCP, PuTTY, Jupyter  
Notebook, RStudio, Tableau,  
Visual Studio Code

### Spoken Languages:

English, Mandarin, Spanish

## COURSEWORK

**05-434** Applied Machine  
Learning

**15-122** Data Structures and  
Algorithms

**15-112** Fundamentals of  
Programming and CS

**36-202** Data Science Methods  
(Intro to R)

**67-272** Application Design and  
Development

**67-262** Database Design and  
Development

## ACTIVITIES & INTERESTS

### CMU Blockchain Group:

Learning applications of  
Blockchain technology and  
cryptocurrencies

### CMU Club Tennis:

Social Media Chair

### Scotty Labs:

Organizing and hosting CMU's  
largest hackathon

**CMU Entrepreneurship Club**