

# Ivan Zhao

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## Education

### Brown University

B.S. IN APPLIED MATH AND COMPUTER SCIENCE (DESIGN AND AI/ML TRACK)

Providence, RI

Expected May 2022

- **GPA:** 4.0/4.0
- **Relevant Coursework:** Data Structures and Algorithms, Machine Learning, Deep Learning, Computer Vision, Computer Systems, Probabilistic Modelling, Statistical Inference

## Experience

### Mojotech

SOFTWARE ENGINEERING INTERN

Providence, RI

June 2020 - Aug 2020

- Developed internal project management tool used by **60+** engineers, designers, and PM's in **React**, **Redux** and **Phoenix**
- Integrated Github and Slack webhooks into the project and reduced server load time by **25%** by processing event payloads with a background job queue in **Elixir** and **Phoenix**
- Introduced project listing features and global configuration support for command-line interface tool in **Node** and **Javascript**

### Intus Care

SOFTWARE ENGINEER AND PRODUCT MANAGER

Providence, RI

October 2019 - May 2020

- Created dashboards in **React** handling form verification and data querying intended for **100+** users in pilot
- Built a resourceful REST API and implemented authentication through JWT using **Node**, **Express**, and **MongoDB**
- Used clustering algorithm on patient data to determine risk grouping based on form answers with **71%** accuracy

### Loftium

OPERATIONS INTERN

Seattle, WA

June 2019 - Aug 2019

- Created a chatbot in **Javascript** using Messenger and Sheets API that processed user queries and stored relevant data in a Google Sheet to manage over **100 users** a day with an **18%** conversion rate from Facebook to website signup
- Integrated third-party apps using Hubspot API in **Ruby** to automate data migration from internal database to Hubspot
- Automate listing postings in **Javascript** to conduct A/B testing on similar houses to determine new markets to enter

## Projects

### Staying Informed Just to Feel Something

TWITTER VIRTUAL HACKATHON - WON BEST SOCIAL HACK

- Developed a webapp in **Flask**, **React** and **Tensorflow** using Twitter API, IBM Tone Analyzer, and a CNN Model to process tweets for sentiment analysis and truth value of tweets with **74%** accuracy

### Optical Music Recognition

- Implemented algorithms such as Hough Detection and Flood Fill to preprocess sheet music pages to features and scores in **Python**, **Tensorflow**, and **OpenCV**
- Worked on a CNN DL model to classify important features such as notes, accidentals, and dynamics with **90%** accuracy

### Rhyme Time

- Developed a language model in **Tensorflow** to generate limericks using LSTM cells through phoneme detection and then mapping to words using CMU's phoneme dictionary
- Scraped poems from the web using **Python** and **BeautifulSoup** to pull limericks and parse them into functional data

### Wander

- Worked on frontend which allows users to create itineraries, add interest points, and view itineraries in **React Native** and **Firebase**
- Integrated flight information from email using **Email Parsing API** to create itineraries
- Utilized Google's Search and Places API to find cities and points of interest and implemented **Dijkstra's algorithm** to optimize travelling time between key locations

## Extracurriculars

### Tea Time (Cofounder)

July 2020 - Present

- Hosted and moderated weekly chats with **40** members for Tea Time, a community and series of fireside chats for LGBTQ+ individuals in tech and tech adjacent to connect and chat with professionals in industry about being queer
- Created a resource document for community members to use during job searches and at school with topics such as interviewing tactics, job opportunities, and finding safe spaces

## Skills

**Programming** Python, C, Scala, Java, Javascript, Elixir, OCaml, HTML, CSS

**Frameworks** Tensorflow, PyTorch, React, React Native, Redux, Phoenix, Node, Express, Flask, MySQL, PostgreSQL, MongoDB, Firebase

**Tools** Docker, Jira, Git, GitHub, Linux

**Hobbies** Climbing, Baking, Crosswords, Dogs, Travelling