

Junhong Pan (Paul)

(626) 691-8088 | panjunhong05@gmail.com | [linkedin.com/in/jpan05](https://www.linkedin.com/in/jpan05) | github.com/paulpan05 | thepaulpan.com | Walnut, CA

Education

University of California San Diego

June 2022

Bachelor of Science, Computer Science

GPA: 3.31

Coursework: Discrete Math, Data Structures, Algorithms, Theory of Computation, Software Engineering, Machine Learning for Music and Audio, Linear Algebra, Multivariable Calculus

Experience

Research IT Intern | Eli Lilly and Company

June 2019 – Aug 2019

- Developed on project for game simulation that calculates immune response from amino acid placement.
- Enhanced computation 1000-fold for bioinformatics algorithm Needleman-Wunsch through migrating from Node.js to Golang.
- Reduced server maintenance cost through assisting with the transition of on-premise servers to scalable AWS offerings.
- Technologies:** React.js, D3.js, Golang, Node.js, AWS Lambda, Confluence, TypeScript

Software Engineer | Myze

Feb 2020 – Present

- Working for clothing suggestions startup which suggests user clothing types using collaborative filtering.
- Currently developing the main website for the company, primarily the user authentication implementation using AWS Cognito.
- Technologies:** Scikit-learn, Flask, React.js, AWS Elastic Beanstalk, AWS EC2, AWS Cognito, AWS DynamoDB, TypeScript, Python

Projects

Triton Exchange React, Node.js, TypeScript, AWS DynamoDB, Jest triton-exchange.netlify.app Apr 2020 – June 2020

- Lead software development on a prototype of UCSD's potential future marketplace, replacing existing Facebook selling group.
- Worked in a team of 10, utilizing Scrum agile framework to enhance project quality.
- Developed with AWS serverless stack (DynamoDB, Lambda, S3) along with Jest for unit testing.

SideTrack Python, JavaScript, TensorFlow, Keras, Flask devpost.com/software/sidetrack

Mar 2020

- Developed application which warned users of pothole locations around the city.
- Won **Code Green Track Honorable Mentions** and **Google Cloud Prize Honorable Mentions** at **LA Hacks 2020**.

Honey4Groceries Swift, Golang github.com/Honey4Groceries/Honey4Groceries Nov 2018 – June 2019

- Application gives users suggestions on where to shop based on grocery prices in shopping cart.
- Pioneered the location services of the app, along with parts of the Golang back-end in a team of 10 people.

Research Project

Beethoven Bot TensorFlow, Keras, Python, music21, Magenta github.com/paulpan05/beethoven-bot July 2020 – Aug 2020

- Generated Beethoven style compositions with a 4 million parameters model and note timing information preserved.
- Utilized **bidirectional LSTM** neural network with **attention layers** to enhance training time and quality of generation.
- One of the only models capable of optionally generating music with multiple instruments, wrote a research paper on the topic.

Certifications and Awards

Best App Design – CodePath iOS Demo Day github.com/Tinder-for-Boba/FOODIE-Mobile-App May 2020

- Lead development of UI in a team of 4, carefully picking cross-platform layout engine (Yoga) to decrease coding overhead.
- Food bonding app designed to match users with other users who have the same preferences and times available.

Best Cybersecurity Hack – SLO Hacks 2020 devpost.com/software/slo-hacks-2020

Mar 2020

- Displays Common Vulnerabilities and Exposures (CVE's) of each website visited via a Chrome extension.

CodePath Professional iOS Bootcamp

Jan 2020 – May 2020

- 4-month long iOS development bootcamp learning about UIKit and Storyboard UI development with Swift.

Leadership

Front-end Developer | Association of Computing Machinery (ACM) UC San Diego Branch

Nov 2019 – Present

- Developer for ACM's front-end tools based off of Figma design, hosted multiple Python workshops.

Technical Committee Member / Projects Mentor | IEEE UC San Diego Branch

Sept 2019 – June 2020

- Mentored 3 teams, with 4 people in each. Hosted a workshop on React and assisted in many others.

Skills

Languages: Python, JavaScript, TypeScript, Java, Swift, C++, C, LESS, SASS, Go, Bash, R, ARM Assembly, MATLAB, HTML, CSS

Frameworks: React, Redux, TensorFlow, Keras, Scikit-learn, Node.js, Express.js, Flask, Spring MVC

Databases and Tools: DynamoDB, PostgreSQL, TravisCI, CircleCI, GitHub Actions, Jest, AWS Lambda, Amazon S3, Docker