Junhong Pan (Paul)

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Education

University of California, San Diego   **December 2021**
Bachelor of Science, Computer Science   GPA: 3.30

Experience

Research IT Intern | Eli Lilly and Company   **June 2019 – August 2019**
- Implemented **React** and **D3.js** based Tetris-like game with amino acids falling onto germline sequences. The goal is to educate scientists about how placement of amino acid affects immune response.
- Explored various technologies suitable for back-end computation, such as **AWS Lambda**, **EC2**, **ECS**, and **Red Hat Openshift**, with the purpose of allowing the algorithms scale according to load.
- Updated the IT team during stand-up meetings on issues regarding the in-house queue-based server, as well as the benefits and drawbacks of each of the new alternative services that was tried.
- Maintained documentation on **Confluence** for setting up new technologies that were explored.
- Launched **AWS Lambda** functions for alignment score computation and score keeping, written in **Go** and **Node.js** respectively, with **DynamoDB** as the database.

Projects

Containerize – Shareable Markdown Note-taker (containerize.thepaulpan.com)   **August 2019 – now**
- Web-based **React** note-taking app allowing users to save notes in markdown, with a playground for markdown practice.
- Leveraged **Redux** framework to better manage states of the app.
- **Redux-Thunk** module also used to handle asynchronous state changes, such as user authentication page.
- Utilized **AWS Amplify** for front-end authentication, restricting access to AWS services with **IAM Roles** for security.
- Implementing **Node.js GraphQL** back-end with **Apollo Server**, using the **Serverless CLI** to handle deployment onto AWS.

Honey4Groceries – iOS Grocery Suggestions App   **November 2018 – now**
- Native **Swift** iOS application giving users suggestions on where to shop according to location preferences and prices of items in the user's shopping cart in different stores.
- Worked in a team of several students on a twice-weekly basis.
- Helped with UI development using **PureLayout API** instead of default **AutoLayout** for more abstraction in code.
- Contributed primarily to the location services of the app, along with parts of the **Go** back-end.

Portfolio Website (thepaulpan.com)   **July 2019**
- Transitions implemented for every section of page handled with **React Transition Group.**
- First React project to be written in **TypeScript** for better maintainability and code linting in Visual Studio Code.
- Deployment of website is automated with **Netlify**.

Solutions to Climate Change – How you can get involved? (paulpan05.github.io/wcwp-climate)   **February 2019 – March 2019**
- Launched website with front-end developed in **HTML**, **CSS**, and **JavaScript**, with **Bootstrap** library for styling.
- Chart.js library used to plot effect of certain activities have on carbon emissions.

Facebook Messenger Bot for ECE Undergraduate Student Council (ECE USC)   **January 2019 – March 2019**
- Part of a team of 8 people working on messenger automation for the ECE USC page, written using **Python Flask**.
- Specifically contributed to the scheduled event reminders and RSVP functionality, performed with **CRON** jobs that message users with ID's stored in a **MongoDB** database.

IEEE Quarterly Projects (Spring 2019)   **April 2019 – June 2019**
- Worked in a team of three on automated door that opens with the scanning of RFID and closes with distance detection.

Easy Tour – LA Hacks 2019   **March 2019**
- Developed with one other person on a **Node.js** web app giving users travel itinerary based on current emotions.

Languages and Frameworks

HTML, CSS, Java, Python, JavaScript, TypeScript, D3.js, React, Redux, Node.js, GraphQL, Go, Swift, DynamoDB, MongoDB, C, C++

Coursework

UNIX Tools and Command Line, Programming in Java, ARM assembly, Discrete Math, Linear Algebra, Data Structures and Algorithms