Tiancheng (Alan) Luo

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EDUCATION

New York University, New York, NY   Sept 2019 – (expected) May 2021
- M.S. Computer Science

University of Iowa, Iowa City, IA   Aug 2015 – Dec 2018
- B.S. Computer Science

WORKING EXPERIENCE

Teaching Assistant   New York University, New York, NY   Sept 2019 – Present
- Teaching Assistant for Practical Computer Security (Present). The class focuses on both software and web security.
- Teaching Assistant for iOS Programming (Sept 2019 – May 2020). The course teaches both **Objective-C** and **Swift**.

Software Engineer Intern   HalloApp, Inc., Palo Alto, CA   May 2020 – Aug 2020
- Added features to a social networking app on **iOS** using **Swift** and **SwiftUI**.
- Finished the **Avatar** project that allows users to add, change, and remove their avatars. Utilized **XMPP** protocol to communicate with the server. Also utilized the **Combine framework** to handle real-time avatar update.
- Finished the **Share Extension** project, allowing users to share content (such as images, videos, URLs) from other apps.

Software Engineer   Advanced Institute of Information Technology, Peking University   Jan – Jul 2019
- Developed Web (**HTML/CSS/JavaScript**) and iOS (**Swift**) apps and backend servers (**Flask**, **Laravel**, and **MySQL**) to implement business solutions (such as tracking employees' workflow and collecting marketing data). The workflow app increased a factory's productivity by 7%, and the marketing data app decreased the salesperson's working hours by 2 hours per market area.
- Wrote **Python** scripts to stripe information from the production log of factory machines for further analysis. The scripts found symptoms before failure happened and calculated the average failure time. It helped to decrease the downtime by 33%.

PROJECTS

Shopcart   Sept – Dec 2020
- A microservice for an e-commerce website using **Flask** as the framework, **RESTful API** as the architectural, and **PostgreSQL** as the database system.
- Implemented **unit testing (TDD)** and **behavior testing (BDD)** to speed up development and refactoring.
- Configured a **CI/CD** pipeline so that the app can be deployed to **IBM Cloud** faster.

Price Tag   Apr – Jul 2019
- An iOS app that assists salespeople in collecting price data and sales status and analyzing market demand. The app cuts data collection time in half so that salespeople have more time to market products.
- Implemented an **iOS** app (**Swift**) to scan price tags and detect price numbers through iOS build-in VisionRectangleDetection.
- Implemented a backend server with **Flask** to accept images and query a pre-trained **CRNN** model for text recognition.
- Implemented a backend server with **Laravel** and **MySQL** to record all results for further analysis.

Production Monitor   Feb – Apr 2019
- A web app that pulls production logs from machines and shows production statuses to the maintenance worker. The app also has a linear model to predict machine downtime. The app increased the factory's productivity by 23%.
- Implemented a backend server with **Flask** to accept and return data in **RESTful API** format. The data stored in a **MySQL** database.
- Implemented **Python** scripts to pull production logs from machines, extract useful information, and send data to the backend server.
- Implemented the front-end app with **HTML/CSS/JavaScript** to show the results.

SKILLS

- Python, Java, PHP, Ruby, Swift, Objective-C, C / C++, Go, HTML & CSS, JavaScript, Markdown, LaTeX
- Laravel, Ruby on Rails, Bootstrap, Flask, React, jQuery, Amazon Web Services, DigitalOcean, Heroku, GitHub, Docker

CERTIFICATIONS

- AWS Certified Developer – Associate