Chengzhu Duan

San Diego, CA

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EDUCATION

University of California, San Diego *La Jolla, CA*
Computer Science, B.S. *Sept. 2017 – Jun. 2021*
GPA: 3.80 / 4.00 (Provost Honors)

Relevant Courses: Advanced Data Structures, Computer Organization & System Programming, Design & Analysis of Algorithm, Software Engineering, Deep Learning & Natural Language

WORK EXPERIENCE

Omniscience Corporation *Palo Alto, CA*
Software Engineer Intern *Jul. 2019 – Sept. 2019*
- Reduced **30%** thumbnail load time by using **Thumbnailator** to expedite image resizing and uploading to **S3 bucket**
- Architected scalable and secure **RESTful Flask** app with **Swagger Codegen** and **SQLAlchemy** for reliable underwriting automation workflow
- Designed enterprise software user interface with **Angular** and **Clarity** to support customizable document note taking
- Implemented document uploading, sharing, editing, and labeling across multiple online platforms with **Angular** and **Spring Boot** for thousands of underwriters from large insurance companies (e.g. RGA Insurance, AIA Group)

Voyager Space Technologies *La Jolla, CA*
Software Engineer Intern *Jan. 2019 – Apr. 2019*
- Reduced **80%** load time by building a **Django** Serializer cache that avoids excessive database queries with pre-fetching
- Used **Angular** to build a custom app loading module that ensures browser compatibility and compiles the correct CSS
- Wrote thousands of lines of robust backend and frontend tests with **Django** testing framework and **Jasmine/Karma** to streamline efficient satellite design process for 300+ aerospace engineers

Yi Yun Information Technology Corporation *Guangzhou, China*
Software Tester Intern *Jun. 2018 – Aug. 2018*
- Conducted automated and manual tests with **Selenium** on an e-commerce web application with 10000+ users
- Implemented a reusable **regression test** module with **Selenium** to speed up the testing process by **60%**
- Followed practice of **parallel testing** and **atomic testing** with flexible and efficient usage of locators

RESEARCH PROJECTS

Predicting Video Game Playtime Before Purchasing
Mentor: Prof. Julian McAuley, UCSD *Sept. 2018 – Jun. 2019*
- Developed a **Bayesian Personalized Binary Classifier** that predicts whether or not users will play a game before purchasing from Steam with **93%** accuracy
- Utilized **Scipy** and **Scikit-Learn** to apply popular visualization and data-processing practices (e.g. **t-SNE**) on huge real world data and build custom machine learning pipeline (e.g. BPR with a sigmoid activation function)
- Optimized the model training with **stochastic gradient descent** through **map-reduce sampling** for faster and more reliable evaluation metrics

PROJECTS

Swag-Bot
★ *21*   *21* *Jul. 2018 – Jun. 2019*
- Used **MySQL** and **MongoDB** to establish an experience point and coin system for 15 Discord servers with 500+ users
- Created 77 commands capable of manipulating texts and images, fetching data, searching information, and playing music by making GET requests to various developer APIs and designing a dynamic music queue on top of Discord's audio stream
- Implemented an anti-spam module to prohibit members from spanning, cursing, and other inappropriate conducts in various channels

Mental Wellness Mobile App
</> *Typescript, React Native* *Apr. 2019 – Present*
- Used **Expo** to incorporate **Typescript** with **React Native** for flexible and robust support for both iOS and Android devices
- Implemented a **lazy loaded** and infinitely scrollable list view that renders a user's plant with clickable fruits and flowers components

SKILLS

Programming & Markup Languages: Java, Python, Javascript/Typescript, C/C++, HTML/CSS, LaTeX
Frameworks & Libraries: Pytorch, Scikit-Learn, Angular, React, Node.js, Django, Flask, jQuery, Spring Boot, Selenium
Databases: MySQL, MongoDB, Firebase
Tools & Methodologies: Unix/Linux, Git, Continuous Integration, Android Studio, Agile Methodology, Design Patterns
Extracurriculars: Project Developer @ Triton Software Engineering, Member @ Tau Beta Pi Engineering Honor Society