Tim Zhang

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SUMMARY

Software Engineer graduating in December 2021 with a Master of Science in Computer Science and hands-on experience developing and deploying full-stack software solutions for enterprise companies and early-stage start-ups. Motivated Self-starter focused on building innovative solutions that maximize performance, availability, and scalability.

EDUCATION & CERTIFICATIONS

- MS in Computer Science, University of Southern California   Expected December 2021
- BS in Information Sciences & Technology - Design & Development Option, Pennsylvania State University
  - IT Solution Officer, Chinese Undergraduate Student Association
  - Presenter, 2018 PSU Cybersecurity for Small Business with 40 entrepreneurs
- BS in Security & Risk Analysis - Cyber Security Option, Pennsylvania State University
  - Security Certificate, National Security Administration (NSA)
  - CompTIA Security+

SKILLS

- **Engineering:** Full Stack Development, OOD, Cybersecurity, Frontend & UI/UX, Backend & Infrastructure, Algorithm Design, Data Structures, Database Systems, Software Design & Coding, Testing & Code Coverage, Data Modeling & Analytics, Performance, Computer Networks.
- **Leadership:** Project Management, Prioritization, Cross-functional Collaboration, Innovation
- **Technology:** Java SE, C++, SQL, Javascript, Node.js, HTML5, CSS3,

RELEVANT EXPERIENCE

Software Engineer Intern, Airbus   **May 2019 - August 2019**

- Developed and deployed a secure internal registration portal to enable 1,000+ employees to sign-up and gain access to Airbus China's intranet site, used for knowledge sharing, communications, and information security.
- Transformed a slow, difficult-to-use system using shell scripts to a high-performance site with a seamless UI and improved UX using HTML and Node.js while maintaining compliance with China's strict local internet laws.
- Analyzed 2019 global internal IT requests and visualized data using Excel to inform IT resource allocation, improve the global IT support strategy, increase system performance, and drive staff productivity.

Strategy Intern, RootCloud   **May 2018 - August 2018**

- Identified and analyzed research papers and US patents for purchase to support the development of innovative cloud-based software used by Sany, RootCloud's Fortune 500 parent company, to analyze construction machinery performance.

SELECT PROJECTS

- **PSU Helper:** Built an Amazon Alexa skill using JavaScript to enable students to build personalized class schedules, develop customized bus routes, and track sports event schedules. The application retrieves real-time GPS location from CataBus websites and parses them into responses via Amazon Alexa platform.
- **Minesweeper:** Designed and developed a minesweeper application using Java that implements an MVC framework with the flood-fill and seed fill algorithms to determine which minefields are cleared after an event is triggered and caught by the listener.
- **Geo-Spatial Data Handling:** Mapped out local restaurants and coffee shops on Google Earth near user GPS locations using Javascript and OpenStreetMap plugins. Used SQL to draw a ConcaveHull geometry shape that displays the minimum area needed to cover all locations given by the user.
- **Solitaire:** Built a Java simulator to play and output the configuration of each play (Solitaire) until the game is finished, using a random pile with random cards or piles with user-defined values.
- **Scrabble:** Developed a Java program to create a list of all legal words that could be created from a 7-letter Scrabble rack in pseudo-polynomial time, in order from most to least points awarded. Implemented HashTable and Trie using Java LinkedList to store and search 273,0000 dictionary words.
- **HW(E)ER Diagram:** Designed a diagram for modeling a STEM organization database system with 40 entities. Mapped out relationships in 3 levels and visualized shared attributes to show connections.