ALLAN DING

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EDUCATION

Yale University, New Haven, CT — Expected Graduation Dec. 2023
Senior, B.S. in Computer Science — GPA: 3.76/4.0
Selected Coursework: Object-Oriented Programming; Data Structures and Programming Techniques; Introduction to Systems Programming & Computer Organization; Algorithms; Software Engineering; Full Stack Web Programming; Algorithms and Society; Human-Computer Interaction

LANGUAGES AND SKILLS

- *Programming Languages:* Python, Java, JavaScript, Golang, C/C++, HTML/CSS, Lua, SQL, R, Racket
- *Libraries/Frameworks:* React, PyTorch, Spring, Express.js, Pygame, Angular, Docker, MongoDB, jQuery, Git, Ajax
- *Skills:* Object-oriented programming, Full stack development, REST APIs, GPT, Machine learning, AI, NLP

WORK EXPERIENCE

Amazon.com, Inc., *Software Dev Engineering Intern*, Seattle, WA — June 2023 – August 2023
- Migrated Amazon Business's "Pay By Invoice" service onto Native AWS using ECS clusters to enable CloudWatch Container Insights for enhanced application monitoring and autoscaling capabilities
- Simplified 8 shared front-end components (3000+ lines of code) by incorporating React hooks and redux slices, resulting in greater reusability and streamlined debugging workflows
- Reduced the risk of user and region-specific errors by implementing form input validation, updating the string translation protocol, and coding robust UI/UX bug fixes to decrease customer-reported IT tickets

Casa Systems Inc, *Full Stack Software Developer Intern*, Andover, MA — June 2022 – August 2022
- Automated CMTS (Cable Modem Termination System) monitoring scripts using Python and SSHv2 API protocols
- Eliminated reliance on third-party services by developing a web application using Flask, JavaScript, and Python to centralize all CMTS monitoring data from 5 customer companies
- Analyzed CMTS monitoring data by automating R scripts to compare hardware performance after customer upgrades

LILY Lab, *Research Intern*, New Haven, CT — January 2022 – May 2022
- Increased the accuracy of an NLP search engine by updating text crawler functionality to improve user experience
- Tested the NLP search engine by implementing a bot to search a random set of keywords to show a reduction of "no results found" outcomes

SELECTED PROJECTS

- **Reinforcement learning (RL) for Automated Game Testing** (Python, PyTorch, Pygame): trained three RL agents to play Qwixx and two Qwixx variants by altering two end-game conditions and optimizing for maximum point accumulation to quantify differences in game quality and study the feasibility of automated game testing
- **Twitter bot** (Python, GPT-2): trained a natural language neural network model to determine positive or negative sentiment by scraping thousands of political Tweets with the Twitter Developer API, then generating response Tweets, based on predetermined political leanings, to a designated Twitter account
- **CampusClicks** (MongoDB, Express.js, React.js, Node.js): implemented and deployed a web application that serves as a centralized platform to connect Yale Students to student freelance services like photographers by incorporating instant-booking mythology to increase price transparency and exposure to student freelance market

ATHLETICS

US Junior and Cadet National Travel Team — September 2011 – Present
- Ranked 4th in the US U17 category; Represented the U.S. at 10+ World Cups, and 2017 Pan-American Championships; Junior National Champion

Yale Division I Men's Varsity Fencing Team — August 2019 – Present
- Gerald R. Ford Scholar-Athlete Award: Awarded to the graduating senior of Timothy Dwight College who best exemplifies qualities of academic excellence and athletic achievement