

ALLAN DING

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EXPERIENCE

Amazon.com

Apr 2024 – Present

Software Development Engineer

Seattle, WA

- Driving the adoption of Amazon Business's Pay By Invoice service by developing an event-based notification system using AWS Lambda, SQS, and SNS with AWS CDK
- Secured vulnerable endpoints from IDOR attacks by implementing a reusable Spring annotation to validate incoming requests, reducing the risk of unauthorized data access

Software Development Engineering Intern

Jun 2023 – Aug 2023

- Migrated Amazon Business's 'Pay By Invoice' service to native AWS/ECS clusters using Spring MVC to reduce maintenance and overhead costs by enabling CloudWatch's enhanced monitoring and ECS's autoscaling capabilities
- Utilized React hooks and Redux to develop and integrate reusable UI components for the newly migrated service, enhancing reusability and streamlining debugging workflows

Capacity Management International

Dec 2023 – Apr 2024

Software Engineer

Dennis Port, MA

- Increased return customer bookings by 25% by developing a MERN stack vacation property web application using Typescript, AWS Lambda/S3 buckets, REST APIs, JWT authentication, and custom UI components
- Pioneered ChatGPT integration to analyze customer reviews, enhancing management decision-making

Casa Systems

Jun 2022 – Aug 2022

Software Engineering Intern

Andover, MA

- Deployed automated CMTS (Cable Modem Termination System) monitoring scripts to Linux/Unix machines that upload results to remote servers using Python/Pandas and SSHv2 API protocols, saving developers substantial time
- Built a web application using Flask, JavaScript, Django, and Python to centralize CMTS monitoring data from major telecom companies, eliminating reliance on third-party services

PROJECTS

CampusClicks

Aug 2023 – Dec 2023

- Implemented MERN stack web application with S3 buckets and OAuth/YaleCAS to give student freelancers a platform to create custom portfolios and promote themselves to Yale affiliates

Reinforcement Learning for Combinatorial Games

Jun 2023 – Nov 2023

- Trained reinforcement learning agents using PyTorch and Q-learning to play variants of the dice game Qwixx that achieved 96.1% of the optimal strategy's average score found by prior research

Twitter Bot

Jun 2022 – Aug 2022

- Created a model with **TensorFlow** to determine positive/negative sentiments of an imitation Twitter news outlet
- Trained **LLM** with **GPT-2** to generate replies to tweets made by the mock account based on simulated political biases

EDUCATION

Yale University, New Haven, CT

Dec 2023

B.S. in Computer Science

GPA: 3.78/4.0

Selected Coursework: Data Structures; Algorithms; Software Engineering; Full Stack Web Programming; Systems Programming; Object-Oriented Programming; Human-Computer Interaction; Discrete Mathematics

Awards: Gerald R. Ford Scholar-Athlete Award: Awarded to the graduating senior of Yale's Timothy Dwight College who in his or her four years best exemplifies qualities of academic excellence and athletic achievement

SKILLS & INTERESTS

Programming Languages: Python, Java, Typescript, JavaScript, Go, C/C++, HTML/CSS, Lua, SQL, R

Libraries/Frameworks: ReactJS, Node.js, Express.js, Spring, Django, Flask, Pandas, jQuery, PyTorch, NumPy

Technologies/Concepts: AWS, MongoDB, REST APIs, Git, Heroku, Ajax, Docker, CI/CD, GPT, Machine learning, AI

Interests: Landscape photography, Strategic board games, Hip-hop dancing

ATHLETIC ACHIEVEMENTS

Yale Division I Men's Fencing Team, US Junior and Cadet National Travel Team, Junior National Champion