

Allen Zheng

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Education

University of Washington

Bachelor of Science in Informatics, Minor in Data Science

Seattle WA

September 2023 - June 2027

Relevant Coursework: Machine Learning, Data Structures and Algorithms, Data Science, Client Side Development, Server Side Development, Front End development, Search and Recommendation Systems

Experience

Software Development Engineer Intern | Amazon

June 2025 - September 2025

- Designed and developed a real-time data visualization dashboard using AWS QuickSight and AWS CDK (TypeScript), integrating Amazon Timestream to monitor data accuracy across fulfillment centers
- Built and supported automated data refresh pipelines processing millions of operational records daily, ensuring 24/7 data availability for warehouse management teams
- Led technical design decisions for a full-stack solution, implementing scalable, cloud-native infrastructure to support continuous data monitoring and seamless integration of new data flows
- Established automated synchronization processes to keep fulfillment center performance metrics updated in dashboards and support onboarding of new regions and data types via internal tools and API operations

Software Development Intern | Artly Coffee

September 2024 - January 2025

- Developing a data annotation tool incorporating Facebook's SAM2 model to automatically mask user labeled objects improving robot accuracy in grabbing objects capable of withholding 100+ files
- Creating and annotating training datasets with 300+ photos for fruit detection assisting in the design of a new robot function for peeling and slicing fruits
- Improving latte art scoring model by modifying reward values to match professionally made latte art

Technical Projects

2D Automated Car

July 2024 - September 2024

- Designed and developed a custom 2D simulation environment for an autonomous car, incorporating obstacles, goal-based navigation, and dynamic interactions
- Applied a reinforcement learning agent using Deep Q-Network (DQN), optimizing the agent's training with epsilon decay and advanced hyperparameter tuning to improve decision-making performance
- Used TensorFlow to design and train neural networks, achieving stable learning and performance improvements, with model checkpoints and evaluation metrics

Peony Identification App

June 2024 - July 2024

- Custom-trained Sequential model to identify peonies specifically compared to other flowers
- Collected, cleaned, and labeled 1000s of photos of flowers from databases and web browsers for training
- Designed and developed a website for image capture and classification with OpenCV and Flask backend for image processing and machine learning algorithm classification

Additional Experience

Web Tools Consultant | University of Washington Academic Technologies

June 2024 - Present

- Provided technical support via email and phone to 100000+ staff/instructors at the University of Washington
- Collaborated with the UW LMS team to test and improve services, including Canvas, Zoom, Panopto
- Research and document solutions to technical issues while gaining experience in software testing

Researcher - Seattle Children's Hospital

April 2024 - Present

- Cleaned and organized 10000+ entry datasets for database of all pediatric hospitals across America

Skills

Languages: TypeScript, Java, Python, SQLite, R, HTML

Frameworks: Jupyter Notebook

Developer Tools: AWS, Git, VSCode, Anaconda, Google Colab

Libraries: Pandas, Tensorflow, Matplotlib, NumPy, Pytorch