Ashley Chen

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EDUCATION

Case Western Reserve University

B.S. in Computer Science, B.S in Data Science and Analytics Dean's High Honors List

Relevant Coursework: Intro to Operating Systems and Concurrent Programming, Intro to Machine Learning, Data Structures, Discrete Mathematics, Intro to Data Science Systems, Logic Design and Computer Organization, Intro to Database Systems, Algorithms, Linear Algebra

PROJECTS & EXPERIENCE

Undergraduate Researcher

INVent Lab

• Built convolutional neural networks using PyTorch, U-Net architectures, and DenseNet architectures to perform digital pathology segmentation of epithelium versus stroma regions and digital pathology classification of types of lymphoma cancer

Grocery Store Database Project

- Designed and implemented a relational database in Microsoft SQL Server to simulate grocery store operations, including sales, inventory, employees, and suppliers
- Optimized data integrity and performance using normalization techniques, indexes, and triggers
- Automated inventory management with stock tracking and restocking triggers based on supply levels
- Developed an interactive Java GUI with login validation and simulated cashier functions

Artificial Intelligence Intern

Logitech

- Developed a CMF (Color, Material, Finish) Materials Library system, improving material information accessibility by 2x through an internal application, and presented it to 50+ engineers
- Implemented a full-stack application with an AI summarizer, SQLite3 database, and GUI using Python and Tkinter
- Utilized OpenAI API to extract and categorize key material information from inputted web sources, such as manufacturer websites

Star Type Classification Project | UCLA Computer Science Summer Institute **July 2022**

- Implemented various prediction methodologies (neural network, support vector machine, etc) using scikit-learn to predict star type in Jupyter Notebook
- Evaluated and compared algorithms to identify the most accurate model

Arteo | California State Summer School for Mathematics and Science (COSMOS) **July 2021** Multimedia experience showcasing the intersection of multiple art forms through sound and visuals

Connected external hardware to Raspberry Pi using circuitry, translated distance from an ultrasonic sensor into sound frequencies using Python, and connected sound frequencies to create particle visuals in Pure Data's GEM patch (Graphics Environment for Multimedia)

SKILLS

Languages: Java, Python, C, HTML/CSS, Javascript, SwiftUI, SQL, R, MATLAB Libraries/Frameworks: NumPy, scikit-learn, pandas, matplotlib, PyTorch, TensorFlow

December 2024

June 2024 - August 2024

April 2024 - January 2025

2023 - 2027 GPA: 4.0/4.0