Rachel Kim

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Education

University Of Washington Bothell, WA
BS Computer Science & Software Engineering *GPA: 3.76* June 2020 - March 2023

Relevant Coursework
• Data Structures & Algorithms, and Discrete Mathematics II • Multimedia Data Processing • Information Assurance and Cybersecurity • Database Systems • Network Design and Programming • Digital Forensics

Experience

Walmart Global Tech Bentonville, Arkansas
Software Engineer II May 2023 - Present

- Integrating machine learning and natural language for 240% increase in chatbot's query recognition
- Creating Springboot API using BigQuery and GoogleSQL to automate inventory information retrieval
- Develop full-stack website with React.js and Node.js for AI-driven conversational bot

UWB Department of Computing and Software Systems Bothell, WA
Teaching Assistant September 2022 - March 2023

- Hosting office hours for over 200 students in the Data Structures and Algorithms course
- Delivering instruction on C++ and Java (fundamentals, structures, memory management, etc.)

Haggett Hall Seattle, WA
Residential Community Standards Representative March 2019 - July 2020

- Increased student participation at dorm events by 120%
- Designated speaker at community living workshops with dozens of attendees
- Managed up to 50 eviction pleas and notices for tenants

Technical Skills

Languages:	Java, HTML/CSS/JavaScript, TypeScript, Python, C/C++, MySQL, PostgreSQL
Frameworks/Libraries:	CSS Grid/Flexbox, Spring, Hibernate, React, Node, Express, Redux, Google BigQuery
Tools:	GitHub, Postman, Docker, JUnit, Heroku, AWS, DevOps, Git, Linux/Unix

Projects

Content-based Image Retrieval App *Python, Tkinter, Docker, Pillow, Numpy*
https://github.com/GoldenKimchee/CBIR-app
Python app that analyzes an image's RGB values then calculates the color intensity and scheme with the Manhattan Distance formula. • Utilizes relevance feedback for machine learning. • Reduced image analysis time by 80% by using numpy and caching methods.

Video Game Review API *Java, SpringBoot, Azure, Hibernate, Postman, PostgreSQL*
https://github.com/GoldenKimchee/Video-Game-API
REST API that fetches video game review data. • Worked with a scrum team to design a schema and improve query efficiency. • Developed using Java SpringBoot and Hibernate ORM. • Hosted PostgreSQL database on Microsoft Azure.

TFTP Program *C++, Socket* https://github.com/GoldenKimchee/TFTP-Program
Program for client and server side that uses Trivial File Transfer Protocol • Allows client to read or write a file onto a remote host • Multiple 512 byte-sized packets can be exchanged and read from both server and client side for bigger text files • Includes acknowledgement and error packet checking based on block number • Able to handle multiple client requests on different sockets

Video Shot Boundary Detection System *Python, Tkinter, Numpy, Pillow*
https://github.com/GoldenKimchee/Video-Shot-Boundary-Detection-System
App detects the start and end of each shot, identifying both cuts and gradual transition. • Displays shots in Tkinter UI, where each shot can be played. • Implements twin-comparison based mathematical approach to distinguish shots as cut or gradual transition. • Improved video processing by 40% with numpy, caching, and bitwise operations.