JONATHAN Y. CHO

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EDUCATION

University of Washington M.S. - Computer Science & Software Engineering   **Apr. 2025**
University of Washington B.S. - Computer Science & Software Engineering   **Jun. 2021**
- **GPA**: 3.77/4.0 | **Dean's List**: 2018-2021 | **Upsilon Pi Epsilon:** 2020

Related Coursework

Software Engineering | Data Structures, Algorithms, and Discrete Mathematics I & II | Technical Writing | Management Principles for Computing Professionals | Operating Systems | Cloud Computing | Database Systems | Intro Game Dev | Information Assurance and Cybersecurity | Game Engine Development |Intro Artificial Intelligence | Advanced 3D Graphics | Multimedia Database System

EXPERIENCE

Graduate Research Assistant @ [Intelligent Networks Lab](#)   **Autumn 2023 - Current**
- Simulating network-structured nervous systems using high-performance computing & artificial intelligence.

Undergraduate Teaching Assistant @ Univ. of Washington   **Autumn 2020**
- Course: Data Structures, Algorithms, and Discrete Mathematics I (DSA).
- Provided personalized feedback & comments to 40+ students, fostering understanding of course material.
- Leveraged deep understanding of DSA to assist professor in grading assignments & exams, ensuring timely feedback.
- Led supplementary study sessions to help clarify and develop understanding of the topic.

Undergraduate Research Assistant @ Cross Reality Collaboration Sandbox   **Spring 2020**
- Conducted in-depth research on the Augmented Space Library (ASL), utilizing Unity & Mixed Reality Tool Kit.
- Developed two immersive [virtual reality minigames](#) that contributed to a graduate student's thesis project.
- Facilitated usability studies, stress testing ASL network with over 100 users to identify key areas of improvement.
- Collaborated with team members to present research findings and project updates at team meetings.

PROJECTS

Retrieve It | Image Retrieval System   **Sep. 2023 – Nov. 2023**
- Implemented [Content-Based Image Retrieval](#) system with Intensity, Color-Code, and Relevance Feedback.
- Developed user-friendly Python GUI enabling users to select images relevant based on their specific preferences.
- Created algorithm that calculates relevancy of images utilizing Gaussian & Manhattan Distance for over 100 images.

Roast-Squared Store | Mock E-commerce Website   **Jan. 2022 – Feb. 2022**
- Created a [web application](#) using HTML, Bootstrap, & JavaScript to understand the demands of a full-stack developer.
- Developed checkout system that allowed users to view and checkout over 100 items, utilizing PayPal's API.
- Deployed application in a cloud environment using Amazon Web Services Beanstalk and Node.js.

ChilPass | KeePass Replica   **Mar. 2021 – Jun. 2021**
- Built complex [offline password manager](#) in C# that allowed users to insert, update, & remove passwords locally.
- Constructed system to store user passwords into encrypted files using SQLite database.
- Utilized PBKDF2, SHA-256, and AES encryption APIs on .NET framework to ensure privacy of passwords.

Danger In Captasia | Multiplayer Thriller Game   **Oct. 2020 – Dec. 2020**
- Teamed with 3 other students to develop a [real-time multiplayer](#) game in C# using Unity & Photon Engine.
- Designed, built, and programmed various aspects of the game including mini-games, player interactions, and UI.
- Conducted playtesting, collected feedback, & iteratively refined game mechanics for optimal user engagement.

Movie Rental Store | Mock Blockbuster Program   **Mar. 2020 – Jun. 2020**
- Utilized factory pattern with polymorphism & data structures in C++ to simulate features of movie stores.
- Leveraged trees & hash tables to store user profiles & movie rental information (borrow, return & inventory keep).
- Worked with 2 other students to design the implementation of inventory management system.

TECHNICAL SKILLS

Programming Languages: Python, Java, C#, C++, SQL
Tools/Methodologies: Unity, Visual Studio Code, GitHub, Aseprite, Linux, IntelliJ, Scrum, Agile Development, Git