Vincent Nathaniel Wirawan

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Skills: Java, C++, C#, Data Structures, Advanced Data Structures, Algorithms, object-oriented programming (OOP), ReactJS, NodeJS, ExpressJS, MongoDB, HTML/CSS, Unity, MySQL.

EDUCATION

Bachelor of Science in Computer Science | University of Washington — Expected, June 2024
Associate in Science | Edmonds College — Spring June 2022
- GPA 3.85 / 4.0

RESEARCH EXPERIENCE

Undergraduate Research | Edmonds College — January 2021 – June 2021
- Conducted experiments to evaluate the impact of 5G radio waves on radar altimeter systems in airplanes
- Performed flight data tests using drones and developed simulation modules for radar altimeters using Arduino programming
- Utilized Arduino programming to read and process flight data from drones
- Presented research findings to peers and industry experts at a STEM fair
- Received undergraduate research award for successful completion of the experiment

PROJECTS

Unix Shell | Backend — October 2023
Designed a C++ program to serve as a shell interface that accepts user commands and then executes each command in a separate process. The program supports input and output redirection and pipes as a form of IPC between a pair of commands

Movie Store System | Backend — March 2023
Developed a versatile movie rental store management system, handling a range of transaction types and adaptable to various store requirements. The system emphasizes object-oriented programming (OOP), class inheritance, and efficient data storage using hash tables and binary search trees

Content Based Image Retrieval | Frontend, Backend — October 2023
Developed a Content-Based Image Retrieval system utilizing color histograms for comparison, offering two methods (Intensity and Color-Code) to map 24-bit RGB color intensities

Database Web Application Development | Backend — August 2023
Enhanced PHP client-server application hosted on UW's shared server, using a MySQL database.
Customized configuration and code to create list-based and detail reports, with filtering and hyperlink navigation. Implemented secure coding practices to prevent SQL injection attacks

Dijkstra Algorithm | Backend — May 2023
Developed the backend infrastructure for the Dijkstra algorithm, enhancing efficiency and accuracy in graph traversal, facilitating optimal route and distance calculations

ADDITIONAL EXPERIENCE

LAHacks | Hackathon — April 2023
- Designed/developed a full-stack website application using MERN stack
- Developed an inclusive global education platform with virtual study spaces, chatrooms, and resource sharing to democratize education irrespective of location or economic circumstances
- Collaborated with a team of four members to successfully implement a user authentication/authorization system using Google API during a hackathon, showcasing robust problem-solving skills and effective teamwork

Secretary in Computer Science Organization | Edmonds College — September 2021 – June 2022
- Assisted the organization's president in scheduling meetings and managing the organization's calendar.
- Assisted with the completion and submission of the necessary paperwork for the organization
- Coordinated and organized events, such as guest speaker presentations and networking events
- Worked with the organization's executive board to develop and implement new initiatives and programs

RELEVANT COURSEWORK

- Data Structures
- Operating Systems
- Discrete Mathematics
- Computer Hardware
- Algorithms
- Game Development
- Relational Algebra
- User-Centered Design
- Multimedia Data Processing
- Database Systems
- Information Assurance And Cybersecurity