Hoang Long Nguyen

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EDUCATION

University of Washington Bothell, WA
B.S in Computer Science & Software Engineering Anticipated: June 2022
Cum. GPA: 3.61 | Major GPA: 3.74 | Annual Dean's list: 2019-2020

Proficient in Java, C++, Python. Familiar with C, SQL, Javascript, HTML, CSS, R, Assembly
Software: Visual Studio code, Eclipse, Git, Github
Related Coursework: Data Structures and Algorithms, Software Engineering, Analysis and Design, OS

EXPERIENCE

Emory University **Atlanta, GA**
Research Assistant - **S**oftware Development May 2020 – August 2020

- Closely worked with two professors from the Political Science department to build an R-based web application to enable PoliSci researchers to evaluate and audit US Military networks data
- Built support for authentication using CRAN (which saved $200/month vs purchasing the shiny-app authentication add-on) and added the ability for users to manually certify each row of data along with a universal progress-bar
- Used Shiny to build the web application and utilized CI/CD practices to deploy the application to shiny-app.io
- This project allowed 30+ researchers to complete the data audit using a more intuitive UX and regularly uploaded the data to Dropbox

PROJECT

Reservation System January 2020

- Designed a general-purpose reservation system and extended the program to reserve tables and boats for restaurants and boat rental companies using Java
- Utilized inheritance, class design practices, encapsulation, and generics
- Improved the reservation lexicographic sorting runtime by 40% by migrating from bubble-sort to merge-sort

Banking System February 2021

- Built a banking application that allows the customer to open an account, deposit, transfer, withdraw, and display transaction history using C++
- Utilized OOP practices, queues, and binary search tree to efficiently execute the customers' requests and possibly reduce runtime complexity to O(log N) when retrieving, inserting, and removing customers from the system
- Plan to improve the operation's runtime complexity to constant O(log N) by implementing a AVL tree

Sudoku Solver February 2021

- Created a program to solve hard sudoku puzzles using C++, Genetic Algorithm, and object oriented design patterns such as abstract factory and strategy.
- Effectively completed the application in 2 weeks through pair programming practices.

LEADERSHIP

DubHacks20 Seattle, WA
Project Manager/Data extractor **October 2020**

- Planned user stories and feature specifications for a team of 4 to develop a Discord bot for stocks trading education by utilizing Discord API
- Extracted critical stocks information from Yahoo for user display purpose using Python and Selenium