

Syril Jacob

Software Engineering Student

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TECHNICAL SKILLS

Front End and Back End | Python, C, C++, Swift, Java, HTML5, CSS, JavaScript, SQL, React, Terraform, AWS

Relevant Courses | Prob Stats & Machine Learning, Digital Circuits, Programming Fundamentals for C and C++, Practices for Database Management and Design, Pract'l Data Struct Algorithms, Full Stack Web Development, Object-Oriented Princp'l Devpt

Developer Tools | Proficient in Git for version control and collaboration

SOFTWARE ENGINEERING APPLICATIONS/ EXPERINCE

Walmart Global Tech

2022

Advanced Software Engineering Virtual Experience Program

Java | Python | SQL | Git

- Implemented a novel version of a heap by modifying the heap property to compare the values of nodes to their ancestors, creating a "top-down" heap structure that allows for faster insertion and retrieval of the minimum (or maximum) element.
- Designed a system that satisfies complex business requirements by carefully analyzing the needs of the business and selecting appropriate technologies and design patterns, resulting in a scalable, maintainable, and user-friendly solution.
- To satisfy a complex set of requirements, I designed a relational database that is optimized for storing and retrieving data while also ensuring data integrity and performance. This was achieved through the identification of relevant entities and relationships, the creation of a schema, and the use of SQL to implement and manipulate the database
- populated a database with a large quantity of data in disparate formats by using a combination of programming skills and domain knowledge to extract, clean, and transform the data, and then inserting it into the database using SQL commands

Term-Project | Linked List Application

2022

Database of river flow data stored in linked list.

C++ | Git

- The project involves creating a database of river flow data by reading from a text file and storing the data in a linked list.
- The program allows for statistical analysis of the data, including the calculation of statistical measures such as the mean, median, and standard deviation.
- The program will also include user interface elements, such as buttons and menus, to allow the user to interact with the program and request specific analyses.

Final Design Project | Arts Museum Application

2022

SQL database terminal interface application in Python

Python | Git | SQL

- The application allows users to connect to a SQL database and execute queries through a terminal interface using Python as well as initialize and populate one if none existed.
- Users can input and edit data within the database through the terminal, as well as retrieve and view data from the database
- The application includes features such as error handling and input validation to ensure the integrity and security of the database

Personal Project| Tic Tac Toe IOS Application

2022

Interactive tic tac toe game with artificial intelligence.

SWIFT | Git

- The tic tac toe game, developed using the Swift programming language, provides an engaging and interactive experience for users who wish to challenge their skills against an artificial intelligence opponent.
- The game features a user-friendly interface that enables players to easily make their moves and track the progress of the game, while the integrated AI component offers a formidable challenge that can adapt to the player's strategies.

Goldman Sachs - Engineering Virtual Internship | Cracked Leaked Password Database

2020

EDUCATION

University of Calgary, Software Engineering - Bachelor of Science

2021-present