Sathya Ramanathan

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Education

Oregon State University

- Bachelor of Science (BS), Computer Science | Sept. 2019
- Specialization in Cybersecurity

Projects

Personal Website | https://satcom237.github.io/website

Google Authenticator | C++

- Developed an application that uses a Time-Based One Time Password (TOTP) algorithm to generate One Time Passwords (OTPs) every 30 seconds
- Improves device security by 76% by incorporating two-factor authentication
- Implemented in C++ utilizing the HMAC-SHA1 function (OpenSSL Library)

Huffman Coding | C++

- Developed a lossless data compression algorithm that utilizes a binary tree
- Shrinks file sizes on average by 20% through finding the optimal character frequencies
- Implemented in C++ including the compression and decompression components

Aces Up Solitaire | Java

- Developed the fun classic card game with a group including the front and back ends
- Users can deal cards, remove a card from specified column, and move cards between columns
- Implemented in Java, JavaScript, and HTML/CSS

Restaurant Web-App | PHP

- Created the front and back ends with a group for a sample restaurant where users can log-in, reserve a table, view the menu, and redeem coupons from the connected database
- Implemented in MySQL, PHP, and HTML/CSS

Ecological Footprint App | Android

- Calculates user's ecological footprint score and provides sustainable local recommendations
- Incorporates a self-contained SQL database engine leveraging faster transactional speeds
- Implemented in Java (Android Studio) using SQLite and Google Location API

Skills

Languages: *(Proficient)*: C, C++, Python, SQL, HTML/CSS *(Familiar)*: Scala, Java, PHP, JavaScript
Tools: Docker, R, Git, Apache Spark, Node.js, MySQL, Jupyter Notebook, Databricks

Courses

Algorithms, Data Structures, Software Engineering I/II, Cloud/Web Development, Programming Language Fundamentals, Open Source Software, Operating Systems I/II, Theory of Computation, Computer Networks, Database Management Systems, and Linux System Administration