

Francisco Castillo

Computer programmer

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PROJECTS

Note.ify – [Devpost Demo](#)

- Developed Note.ify, a Discord-integrated notetaking solution that addresses challenges in in-person lecture note-taking, as part of my participation in the University of Toronto's NewHacks Hackathon.
- Utilized JavaScript for bot functions, Python for audio recording and Google Cloud services for transcription and summarization. Overcame challenges in Discord integration and API connectivity.
- Successfully addressed credential issues, demonstrated solid understanding of JavaScript fundamentals, and fostered a collaborative environment. Developed proficiency in multiple languages, Discord bot creation, and integration of Google Cloud services.

Webpage Art Museum in React – [Website GitHub Demo](#)

- Webpage developed with Next.js, Bootstrap, Node.js, Express, and MongoDB, the project allows users to search, pick and track their favorite artworks.
- Used Jotai for efficient state management, enabling advanced features such as Favorites and Search History. Incorporated a "Route Guard" to restrict access, ensuring only registered users can use search and Favorites.
- Enhanced security through user registration and login pages, employing JSON Web Tokens. Developed a User API using MongoDB Atlas, ensuring secure storage and enabling cross-device access to Favorites and History lists.

Assembly Line Simulation in C++ – [GitHub](#)

- Developed a C++ assembly line simulation featuring custom constructors for Station objects and a dynamic LineManager class, ensuring precision in order filling and real-time monitoring.
- Implemented intricate methods, incorporating intricate methods like advance ID generation, dynamic display options, and optimized queues for improved simulation functionality. Leveraged advanced move semantics, streamlined item information with an Item struct, and implemented intelligent status tracking with robust exception handling for resilient error recovery.
- The project resulted in a seamlessly operating assembly line, resilient order processing, and dynamic workstations. It enabled error-free production, detailed status tracking, and optimal adaptability for efficient monitoring.

Valet Parking System in C++ – [GitHub](#)

- Designed a comprehensive valet parking application using C++ with a modular class hierarchy, including Vehicle, Car, Motorcycle, and Parking. Ensured encapsulation, leveraging object-oriented principles for a robust and extensible design.
- Integrated dynamic features, adding constant values, dynamic parking spot management, file-based data loading/saving, and comprehensive vehicle operations. The Parking class efficiently handles dynamic arrays, allowing real-time parking, retrieval, and status monitoring.
- The result is a fully functional valet parking solution with flexible design, persistent data storage, and a dynamic parking environment. The application seamlessly manages vehicle entries, exits, and status, providing a reliable and extensible solution for valet parking operations.

Android App Questions – [GitHub](#)

- Created a trivia app for Android devices using Java.
- Provided a user-friendly trivia experience with progress tracking, allowing users to customize the number of questions in each session.

EDUCATION

Computer Programming

Seneca Polytechnic – Toronto, ON – 2023

- Award Ji Hun Kim Mem Scholarship

CERTIFICATIONS

Learning Next.js – [Certificate-online](#)

LinkedIn Learning – 2023

SKILLS

Programming languages: JavaScript, C/C++, Python, Java.

Web technologies: HTML, CSS, Node.js, Express.js, Android, Java, HTML, CSS, React.js, Node.js, RESTful APIs, AJAX, Bootstrap, React Bootstrap, Material UI, NextJS, Tailwind.

Database technologies: Oracle SQL, MongoDB, MySQL, PostgreSQL, PL/SQL.

Software development concepts: Data Structures and Algorithms, SDLC (Software Development Life Cycle), Object-Oriented Programming, Functional Programming, MVC Design (Model-View-Controller).