Charles Spencer Blancas

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Education

Bachelor of Engineering - Software Engineering Co-op	Aug 2021 - May 2025

McGill University
- Cumulative GPA: 3.86/4.00
- 2021 - 2022: Dean's Honor List, Brodeur-Drummond and Professor Martin Levine Scholarships

Work Experience

Desjardins Capital (SQL, Angular, .NET Core, C#, VBA)	May - Aug 2023

Developer Intern
- Optimized SQL query performance by replacing inefficient row-by-row cursor processing with "CROSS APPLY" and a function, resulting in a reduction of query execution time from 50 minutes to just 4 minutes
- Applied the Mediator and Composite object-oriented design patterns to refactor an Angular application, increasing code maintainability and reusability
- Implemented business logic and wrote unit tests for a .NET Core API in C#
- Processed and styled Excel sheets using VBA, facilitating data analysis and enabling efficient decision-making

CIUSSS du Centre-Sud-de-L'Ile-de-Montreal (C#, .NET Core, Blazor, HTML, CSS)	May - Aug 2022

Full Stack Development Intern
- Developed a web application for scheduling interpreters for medical appointments using ASP.NET Core, SQL Server Blazor, C#, HTML, and CSS
- Developed proofs of concept for a native mobile application using the .NET MAUI framework and an authentication microservice with single sign-on using ASP.NET Core

Personal Projects

Ixchel - Markup language transpiled to HTML (Node.js, TypeScript)
- Implemented a transpiler using Node.js to convert Ixchel code into valid HTML documents and created a command line interface for easy usage
- Configured the continuous integration and deployment pipeline using GitHub Actions, enabling automated releases to NPM for easy installation and usage

School Projects

Various projects in ARM assembly	Jan - Apr 2023

- Converted matrix multiplication and binary search algorithms written in C to ARM assembly
- Wrote a whack-a-mole game that used timers, push-buttons, switches, LEDs, and seven-segment displays, once with polling, and refactored with interrupts
- Developed Conway's Game of Life which used a keyboard and a display

University course materials trading platform (Java, Spring, React, JavaScript)	Jan - Apr 2023

- Set up backend acceptance tests with JUnit and Cucumber and frontend acceptance tests with Jest-Cucumber and Vitest and documented with examples
- Set up the continuous integration pipeline to build the project and run acceptance tests using GitHub Actions

Hackathons

ConUHacks VII - ComixAI (Svelte, Node.js, JavaScript)	Jan 2023

- Developed the frontend with Svelte for an application that takes a prompt from a user and generates a comic using GPT-3 and Stable Diffusion

Skills

Languages: JavaScript, TypeScript, HTML, CSS, C#, Java, Python, C, Bash

Frontend: React, Angular, Blazor, Svelte, SvelteKit

Backend: SQL, ASP.NET Core, Spring

Testing: Jest, Vitest, Mockito, JUnit, Cucumber, Gherkin