Alexander Apostolu

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EDUCATION

Honours in Bachelors of Science (H.Bsc.), Computer Science and Mathematics + PEY Co-op
University of Toronto Mississauga Campus (Sept 2022 - Jun 2027)

- Courses: Object Oriented Design (with **Python**), Software Design (with **Java**), Data Structures and Analysis, Computer Organization, Systems Programming (with **C** and **Linux**).

SKILLS

- **Languages:** C, C++, Python, Java, React, JavaScript, HTML, CSS.
- **Tools:** Git, Github, Visual Studio, Linux.

EXPERIENCE

Project Course — Github   January 2024 - Present

- Collaborating within a team of four to develop a full-stack website utilizing **React** for the frontend, **NodeJS** for the backend, and **SQL** for the database. My focus lies in implementing a frontend page using React, and retrieving user information from the SQL database through the backend.
- Actively engaging in **weekly meetings** with our mentor and professor, and participating in private weekly sessions with my mentor to enhance accountability and skill development.

Robotics Club Technical Officer   October 2023 - Present

- Collaboratively created **Arduino** tutorials and workshops for the **IEEE** branch at **U of T**.
- Took charge in the development of an engaging website utilizing **React, HTML, and CSS**, and using **Git** for version control.
- Proactively completed the website **ahead of schedule** and implemented an additional email feature to accommodate user's inquiries, which was highly praised upon the club's review.

Replit Community Manager   April 2021 - Sept 2022

- Organized and led **weekly programming challenges**, showcasing strong organizational skills and promoting teamwork within the community. In the end, I successfully managed a month of programming challenges, receiving **positive feedback** from my supervisors.

PROJECTS

Programming Language — Github
- Developed a bytecode interpreted programming language using **C++ and CMake**, and utilized **Git and Github** for version control and repository management.
- **Faced many challenges**, especially regarding data structures, C++ programming concepts, and language design; however, after numerous months of testing, learning from others, and reading online articles, I successfully delivered a stable version with a simple installation process.
- Designed and developed a website using **JavaScript, HTML, and CSS** to effectively showcase the language's features.

Fluid Simulation — Github
- 2D fluid simulation implemented using **C++, CUDA, OpenGL, and Eigen**.
- Collaborated effectively in a team of four to finish this project within a tight 36 hour deadline for a hackathon.
- Implemented the Navier Stokes mathematical equations using C++ and Eigen, and used CUDA-OpenGL interop to display the graphics.

Paint App — Github
- Collaboratively developed a **Java Windows app** enabling users to create and modify drawings on a canvas.
- Planned and implemented functionality that would allow the user to draw various shapes on the canvas, complete with customizable colours and stroke width. And devised a feature for storing and retrieving user data from a **JSON file**, facilitating local progress saving and adhering to clean architecture and the **MVC design pattern**.
- Effectively worked with my team to open detailed and readable pull requests with **95% test coverage**.
- Successfully delivered a bug free, feature complete version within the deadline, reinforcing my teamwork, time management, and communication skills.