SILVIA LÓPEZ
Computer Engineer

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EDUCATION

SEP 2019 - DEC 2024

University of Toronto – Computer Engineering

- Awarded: Lester B. Pearson International Scholarship

WORK EXPERIENCE

JUN 2022 - JUL 2023

Software Engineering Intern – Uhnder Inc. CA

- Successfully implemented a design tool in **Python** for radar antennas which also automated the task of generating product documentation and figures
  - Improved the efficiency of the design workflow.
  - Created all technical documentation, ensuring clear and detailed guidelines for future users
- Successfully architected a custom 3D visualization solution to represent simulation data using **Python** within the Robot Operating System (ROS) framework and Rviz visualizer.
  - Demonstrated rapid learning and adaptability by quickly acquiring proficiency in the ROS framework
  - Collaborated with multiple teams across the company to ensure alignment and integration with other project components.
  - Set a project timeline and successfully delivered the tool on schedule

PROGRAMMING PROJECTS

APR 2024 - PRESENT

CGRA Data Flow Graph Visualizer - Research Project

- Developing a GUI utilizing **SFML graphics library on C++** to visualize a data flow graph and its congestions on a Course Grain Reprogrammable Array (CGRA).
- Refactored existing code into a modular Model-View-Controller (MVC) system, improving maintainability and scalability.
- Engaging in regular feedback sessions with a master's student to accurately represent complex data flow and congestion information within the GUI.

JUN 2023 - Present

CodeBuddy VS Code Extension – Capstone Project

- Built a programming tutor with the goal of helping novice C programmers learn core coding concepts. The tool utilizes the OpenAI API and will become available as a VSCode Extension.
- Developed the front end of the user-interface with **HTML**, **CSS**, and **Javascript**
- Presented organized status updates to project supervisors, ensuring clear communication and alignment on project milestones and objectives.
- Continuing the project after the end of the capstone course to test it on students in the future.

AUG 2023 - APR 2024

Interactive Sketch Clustering – Research Project

- Collaborated with a postdoc on extending and enhancing an existing stroke clustering algorithm.
- Implemented a feature to handle incremental inputs in **C++**, allowing the system to process and incorporate one sketch at a time, rather than requiring the entire drawing at once.
- Analyzed experimental data rigorously and recognized early indicators of the project's limitations. Despite not achieving the anticipated results, the project allowed me to gain experience in the area of sketch processing.

TECHNICAL SKILLS

Programming Languages

- C/C++
- Python
- JavaScript, TypeScript

Web Development

- HTML, CSS
- Node.js
- React

Tools and Platforms

- Linux
- Git
- Mercurial

COMPETENCIES

- Communication
- Organization
- Collaboration
- Rapid Learning
- Problem Solving
- Time Management
- Adaptability

COURSES

- Computer Graphics
- Computer Architecture
- Compilers & Interpreters
- Artificial Intelligence
- Applied Fundamentals of Deep Learning

VOLUNTEERING

MAY 2024 - JULY 2024

Team Leader for **SIGGRAPH** Conference 2024: Coordinated student volunteer activities for over 200 students and provided on-the-ground support for conference attendees and presenters

AUG 2023

Student Volunteer for **SIGGRAPH** Conference 2023: Provided general assistance for attendees and helped contributors demo technologies by providing support with Virtual Reality headset setup

JAN 2021 - JAN 2022

Graphic Design Lead for **Ontario Engineering Competition** 2022: In charge of designing logo, layout, printing, and theme of marketing materials.