Piotr Wiatr

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Highlights of Qualifications

- Enrolled in level 3 of the 4-year Honours Computer Science Co-op program at McMaster University
- Strong programming and problem-solving skills established through rigorous coursework and research opportunities
- Excellent communication, organizational, and teamwork skills developed through volunteer and internship placements

Education

McMaster University Hamilton, ON

B.A.Sc in Computer Science | cGPA: 3.95/4.0 *Sept. 2022 – Present*

- Relevant Coursework: Data Structures and Algorithms (COMPSCI 2C03), Software Development (COMPSCI 1XD3, COMPSCI 2ME3), Concurrent Systems (COMPSCI2SD3), Operating Systems (COMPSCI3SH3)
- Awards: Provost Honour Roll (4.0/4.0 cGPA during First Year), Dean's Honour Roll (3.5+/4.0 cGPA during First and Second Year)

Experience

Undergraduate Research Assistant May 2024 – Aug 2024

McMaster University *Hamilton, ON*

- Collaborated on the development of a Haskell-based DSL (Coconut) with Dr. Christopher Anand by converting the RISC-V architecture into the DSL and rigorously testing instruction accuracy for assembly-level operations
- Worked in a multidisciplinary team with weekly meetings, collaborating closely with two other research assistants to meet project milestones and troubleshoot technical challenges
- Engaged in quantum computing research in collaboration with IBM, focusing on learning quantum computation principles through educational content and research papers
- Analyzed and implemented promising quantum algorithms such as variational quantum algorithms (VQAs) using IBM's python library Qiskit for execution on contemporary quantum hardware

Teaching Assistant Sept 2023 – Dec 2023

McMaster University *Hamilton, ON*

- Helping to introduce over 200 students to computational thinking in COMPSCI 1JC3
- Teaching and aiding students understand the basics of functional programming in ELM
- Marking and grading student assignments for correctness and code readability

Full Stack Web Developer May 2023 – Aug 2023

McMaster University *Hamilton, ON*

- Supervised under Dr. Christopher Anand and closely collaborated with several teams of 3-5 people on a dynamic booking system and extended the functionality of the online ELM IDE STaBL.Rocks that is used by 15,000+ students with over 1 million compiles
- Developed each full-stack web application using Integrated Haskell Platform (IHP) for the back-end and HTML, CSS, and JavaScript for the front-end
- Continuously integrated changes into each application through Git to ensure smooth collaboration

Projects

STaBL.Rocks Assignment System

STaBL Foundation

- Expanded STaBL.Rocks to incorporate an assignment system that allows over 250 first-year students to complete programming exercises through STaBL's web IDE
- Developed the workflow using HTML/CSS, JavaScript, and Integrated Haskell Platform (IHP) for professors and teaching assistants to both create and mark assignment submissions
- Worked closely with other teams, along with 2 other teammates, to ensure proper integration of the assignment system

Technical Skills

Languages: Python, C, Java, SQL, JavaScript, HTML/CSS, Haskell, ELM
Frameworks: IHP, Flask, Qiskit, React.js, Node.js, Express.js
Tools: Git, VSCode, IntelliJ, SQLite, DBeaver, Visual Studio, Linux, Selenium