Zeph Van Iterson

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Skills

- Python, C, C++, C#, Java, MySQL, PyTorch, Git, Unity

Education

- Queen's University Bachelor of Applied Science, Major in Computer Engineering (Expected Graduation 04/25)
  - Achieved Faculty of Applied Sciences Dean's List (2024)
  - Received Queen's University Excellence Scholarship (2022)

Work Experience

NSERC USRA Researcher (Link to Abstract) May - August 2024

- Queen's University MUSE Lab - Kingston, ON
  - Received the NSERC Undergraduate Student Research Award to fund the development of a research paper on Open Source Software for Social Good, "Comparing Developer Attraction and Turnover in OSS vs OSS4SG Projects" alongside supervisor Dr. Mariam Guizani.
  - Designed and developed research software in **Python** to gather, analyse and compare information from hundreds of Github repositories, using **REST API** and **GraphQL**
  - Implemented a classifier to categorize projects by alignment with the UN's Social Development Goals(SDGs) using multiple SVM, Random Forest, and LLMs.
  - Researched, verified, and implemented proven techniques from other relevant research papers including state-of-the-art research.
  - Collaborated with other professors to refine methodology and analysis.

Junior Software Engineer May 2022-August 2023

- Loen.Design Studio - Ottawa, ON
  - Efficiently implemented server software in **Python** for a distributed real-time system which controlled and monitored 100 microprocessors in order to ring bells at the same frequency as world events as part of an interactive art piece.
  - Created an SQLite database for efficient storage of data for use in the server.
  - Implemented a GUI interface for the server that allows global server settings to be managed, and allows settings for each individual client to be managed and monitored, as well as a public-facing display that shows the status of all clients in the system and allows observers to make requests for various data sources to be displayed.
  - Implemented the client software using **C** for over 100 embedded systems connected to the server.
  - Added support for a custom macro language that will be interpreted by the clients allowing them to control the various hardware attached to the IO board for the client.
  - Implemented a logging function that will allow an administrator to find issues and bugs.

Undergraduate Teaching Assistant Sept 2022 - Present

- Queen's University Faculty of Engineering, First Year Computer Science - Kingston, ON
  - Assisted students with questions about course material, supervised and assisted in labs, and marked assignments, quizzes, and final assessments for a first-year engineering computer science course.

ESSDEV (Software Development) Project Manager Sept 2023 - Apr 2024

- Queen's University Engineering Society Software Development Team - Kingston, ON
  - Lead and managed a group of 5 students in the development of a game in Unity using C#
  - Organized meetings, assigned work, and ensured deadlines were met

Projects

AI Learning Boss Fight Game (View on Github) 2024

- Unity game that uses machine learning to adapt to the player and respond appropriately to simulate the experience of playing against another human, using **C#** and **SharpNEAT**

Topological Route Navigator (View on Github) 2020

- A **C++** program that finds the safest path to traverse a topological map of a mountain by minimizing change in elevation using a greedy algorithm