Zeph Van Iterson

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Skills

- C, C++, Python, C#, Java, SQL, Git, Linux, Networking(TCP/IP), Embedded Systems, Real-time Systems

Education

- Queen's University Bachelor of Applied Science, Major in Computer Engineering (Graduated 04/25)
  - Achieved Faculty of Applied Sciences Dean's List (2024-2025)
  - Received Queen's University Excellence Scholarship (2022)

Work Experience

Software Engineer — May 2025 - Present
- Loen.Design Studio - Ottawa, ON — May - August 2023, May - August 2022
  - Designed and implemented networked server software in **Python** using **TCP/IP socket communication** to control and monitor 100+ embedded clients in a real-time interactive system
  - Developed an **embedded C firmware system** for 100+ microcontroller-based clients, enabling low-latency hardware control and real-time server integration.
  - Created an **SQLite** database for efficient storage of data for use in the server.
  - Implemented a GUI 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.
  - 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.

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**
  - 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.

Undergraduate Teaching Assistant — Sept 2022 - April 2025
- 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 (View more on Github)

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**

Open Source SDG Classifier (View on Github) — 2024
- Collected and processed data from hundreds of open-source projects, filtered by metrics like contributor count and lifespan, to build training and testing datasets.
- Implemented multiple classifiers, including SVM and Random Forest, and integrated LLM-based agents to assess project alignment with the UN's Sustainable Development Goals (SDGs).