

# Ewen Crawford

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## EDUCATION

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### Queen's University

Expected Graduation: April 2024

*Bachelor of Applied Science, Computer Engineering*

- GPA: 3.0
- Coursework: Digital Logic Networks, Computer Architecture, Data Structures, Circuits

## WORK EXPERIENCE

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### Trend Micro – Network Vulnerability Research Intern

May 2022 – Present

- Developed a practical understanding of vulnerability research skills such as network protocol structures, memory buffer overflows, and reverse engineering.
- Authored reports for 0-day and N-day security flaws, including functional proof-of-concepts to demonstrate attacks on the reported vulnerabilities.
- Produced regex-based network filters for use as attack detection guidance by vendors.

### York Region – Transportation Maintenance Student

May 2021 – Aug. 2021

- Assisted full-time technicians with patrol duties such as performing guardrail and culvert inspections.
- Organized and maintained machinery used for road operations, shuttled people and equipment to job sites.

## PROJECTS

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### Meal Planner App

May 2021 – Present

- A simple Android app for planning meals and indexing recipes.
- Written in Dart using the Flutter mobile framework for UI and an SQLite API for data storage.
- Code available at <https://github.com/eacrawford02/meal-planner-app/tree/develop>

### OpenJGE2D – Open-Source Game Engine

May 2019 – Jan. 2020

- Designed and implemented a rudimentary 2D game engine, consisting of core facilities, a multithreaded scheduler, and a rendering system.
- Written in Java using a wrapper for the OpenGL API.
- Documentation available at <https://openjge.github.io/OpenJGE2D-Website/>

## SKILLS & INTERESTS

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**Technologies:** Vivado, OpenGL, Git, SQL, HTML & CSS, Linux, TCP/IP

**Languages:** C/C++, Verilog/SystemVerilog, Python, Java, Dart, x86 Assembly

**Interests:** FPGAs, graphics programming, game engine development, reverse engineering