

# Michael Giovannini

## TECHNICAL SKILLS

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**Languages:** C, Java, Python, HTML, CSS, JavaScript, mySQL, Assembly

**Operating Systems:** Windows, MacOS

**Development Tools:** Git, GitLab, GitHub, Maven, VS Code, Microsoft Office

## PERSONAL PROJECTS

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### The Ancient Kings Rogue-lite Game

- Developed a turn-based rogue-lite game in **Python** with procedural dungeon generation
- Designed an engine module to handle game loops, key handling and rendering
- Optimized procedural map generation and pathfinding calculations using **NumPy** for efficient operations and performance improvements.
- Utilized object-oriented programming design patterns to maintain a scalable codebase

### Scriptor Text Editor

- Developed a lightweight text editor in **C** for terminal-based usage, supporting basic editing functions
- Designed an intuitive user interface using ANSI escape sequences for cursor movement, text coloring, and screen clearing
- Created robust input handling system to support keyboard shortcuts for efficient navigation.
- Integrated file IO operations, supporting opening and saving files, with safe file saving and overwrite protection, reducing the risk of accidental data loss

## EDUCATION

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### Bachelor of Computing, Computer Science (Co-op)

University of Guelph | Guelph, ON

Sept. 2023 - Present

GPA: 3.8/4.0

**Relevant Coursework:** Object-Oriented Programming, Data Structures, Web Design and Development, Discrete Structures in Computing, Intermediate Programming, Structures and Applications of Microcomputing

### Academic Projects

- Vehicle Database: Designed a database for vehicles in **C** for storing, retrieving and manipulating vehicle data
- Zoo Animal Information System: Developed a zoo information system in **C** that generated statistics features about various animals
- Portfolio Management System: Developed a Java-based investment portfolio management system, applying object-oriented programming (OOP) principles for modular and scalable architecture.

## WORK EXPERIENCE

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### Groundskeeper, Town of Grimsby

May 2024 – Aug. 2024

- Developed strong teamwork skills by collaborating with a partner to plan, and execute required tasks effectively to maintain landscape appearances
- Assessed and resolved on-site challenges such as unexpected weather conditions or equipment issues.

### Grocery Clerk, Food Basics

Mar. 2022 – Aug. 2023

- Collaborated with team members to assist customers and efficiently solve any issues that arose