Jeremy Janella

Co-op Computer Science Specialist at University of Toronto

Toronto, Ontario
jeremy.janella@mail.utoronto.ca
github.com/jjanella | jeremyjanella.com

Profile

A self-teacher and team-player with software development experience, rigorous mathematical ability, and a strong interest in cybersecurity, robotics and machine learning. Equipped with extensive experience in Python, C/C++, Linux, networking, and cybersecurity through countless projects, hackathon, and CTF competitions.

Relevant Experience and Projects

Terraria-like Space Game Development   **2 years**

- Developing a procedural, open-world, gpu-accelerated, multiplayer network videogame, with fully destructable orbiting planets, spacecraft and vehicles.
- Programmed in Python/GDScript, and enforcing secure multiplayer networking with server-authoritative code optimized using design patterns using OOP.

U of T - Java Android App   **2024**

- Developed experience with the software development lifecycle, CI/CD, agile, scrum methods, unit testing with JUnit
- With a team, created an eco-awareness android app using Java, Firebase, Android Studio, Jira, Mockito, and Git

Hackathon - DeCloud - Networking and Docker   **2023**

- Led a team to develop a dynamic-infrastructure peer to peer cloud running on users devices
- Utilized Python, Linux, and Docker containers to deploy applications on remote devices

Hobby - Linux

- Built low level networking and resource monitoring tools with Bash, netcat and C
- In-depth understanding of Linux architecture, using C and Bash to develop OS software
- Practical experience designing networks, configuring and debugging servers
- Completed U of T and Cisco courses indepth on Unix systems and Security
- Experience automating build processes with make

Hackathon - SwipeShield - Machine Learning Biometric Authentication   **2024**

- Created an android app using machine learning for biometric-based passive user authentication.
- Implementation used bash, machine learning algorithms, Python, and Git.

Hobby - Cyber Security & CTFs

- Led a team to place gold in a 4 month blue team cybersecurity competition focussed on Linux server hardening
  - Studied TCP/UDP, NAT, network design, OSI Data Model, CVE detection, OWASP articles
  - Practiced nmap, SQL injections, buffer overflows, Wireshark, network tools
- Experience scanning networks, detecting network and web vulnerabilities, memory manipulation, reverse engineering, and low level languages through CTF competitions

U of T - Web Design and Database Experience   **2024**

- Worked in teams designing dynamic course websites with HTML, TailWind CSS, Javascript, TypeScript, NodeJS, React, SQL, Python, Flask, Svelte and Git
  - Studied SQL and relational algebra database theory

Built a Drone   **2023**

- Built a drone with an Arduino microcontroller and Pi microcomputer, motors, battery, sensors, motors, and a 3D-printed body.
- Developed a C++ flight computer with auto-stabilization code. Programmed microcontrollers using Verilog.

Education

Honours Bachelor of Science, University of Toronto   **2023-2027**

- Specialist in Computer Science (Software Engineering Stream)
- Major in Statistics
- Minor in Astronomy and Astrophysics

Relevant Courses - U of Toronto

- Software Design   [Unit Testing/Agile/Scrum/Java/Android Studio]

- Introduction to Comp. Sci. 1 & 2   [OOP/Encapsulation/C/DataStructures/Efficiency Analysis/Python]
- Computer Organization   [Digital logic circuits/Assembly]
- Software Tools and Systems Programming   [Unix/Linux/C/Bash/Make]
- Introduction to Databases and Web Applications   [HTML/CSS/Javascript/MySQL/Ninja/Relational Algebra]
- Design and Analysis of Data Structures

Work Experience

Software Developer | Parkside Pool   **May 2023 - August 2023**

- Automated business logistics, client and staff management.
- Used Flask, Python, SQL, and Firebase to automate client booking and staff hours, scheduling hundreds of mixed requirement lessons per week.