Natanel Roizenman

Computer Engineering Student

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Skills

Languages: C++, C, C#, Java, VHDL, SQL, Python, JavaScript, MATLAB
Technologies: NodeJS, Electron, Git, Google Apps Script, MongoDB, Linux

Professional Experience

Technical Architect and Developer   Jun 2019 – present
Bialik Hebrew Day School   Toronto, Ontario

- Optimized security badge system by designing an Electron-based JavaScript applet using NodeJS, **achieving a 95% reduction in processing time and saving 15 hours per week.**
- Improved management of 1200+ Google domain users and devices by developing custom scripts and extensions using Google Apps Script, **decreasing IT department workload by 30%.**
- Replaced expensive CMDB with a custom Python script that synchronizes data between Freshservice and Google Admin Console via APIs, resulting in **$5,000 annual cost savings.**
- Supported data-driven executive decision-making by **creating comprehensive reports using Python, pysqlite3, and MongoDB** for executive presentations.
- Ensured project continuity by providing remote software maintenance during university, contributing an average of four hours per week, **preventing potential downtime**.
- Spearheaded a large-scale computer upgrade project, successfully rebuilding 40+ desktops to provide **updated technology for the organization and increasing overall productivity by 15%.**
- Troubleshooted and resolved software-related issues for numerous clients daily, maintaining smooth operations across the domain and **reducing support tickets by 25%.**

Volunteer   Sep 2022
Hack the North   Waterloo, Ontario

- Contributed to the smooth operation of Canada's Largest Hackathon, **supporting 3,000+ participants**.
- Ensured site security by **overseeing a team of 10 fellow volunteers** and engaging with participants.

Projects

Portfolio website 🔗
Developed a CLI-themed portfolio website using **JavaScript**, **HTML**, and **CSS**. Version control in **Git**, hosting on **Netlify** with direct deployment from **GitHub**. Attracting 300+ monthly visitors.

E-reader
Built a custom e-reader by designing a device using a **Raspberry Pi Pico microcontroller**, firmware written in **C++** to interface SD card reader and e-ink display using **SPI**, and a **3D-printed** case.

Automated birdfeeder 🔗
Developed an automated birdfeeder using circuit schematics in **KiCad**, powered by an **STM32-based microcontroller**, and wrote code in **C++** utilizing **STM32Cube HAL** for efficient operation.

Aim-training game 🔗
Created an engaging aim-training game using **object-oriented programming (OOP)** principles in **Java** and implementing a user-friendly GUI with **Swing**.

Minesweeper in Google Sheets 🔗
Implemented Minesweeper in **Google Sheets** using formulas and **Apps Script.**

Education

Pursuing BASc in Computer Engineering   Sep 2022 – Jun 2027
University of Waterloo   Waterloo, Ontario