Emilien **Breton**

EXPERIENCE

Hack the Hill
SOFTWARE ENGINEER — INFRASTRUCTURE TEAM
November 2022 — Present
Ottawa

Zeptile Software
SOFTWARE ENGINEER
*October 2022 — Present*
Remote from Ottawa

Student Works
OWNER / OPERATOR
October 2022 — Present
Ottawa

uOttawa CS Club
CLUB EXECUTIVE
June 2022 — Present
University of Ottawa

- Collaborated with students in team of 3 to organize various small-scale social events and meetups in Ottawa by organizing talks and designing promotional posters using Figma
- Took initiative in wide variety of tasks such as updating outdated information on 🔗 club website, redesigning logo using using Figma, refreshing 🔗 Discord server, and creating internal Notion workspace to improve short-term plannig

PROJECTS

🔗 Personal Website
A PORTFOLIO FOR SHARING VARIOUS PROJECTS
JavaScript • HTML • CSS • Markdown • Next.js

- Designed and implemented appealing UI and optimized UX using Google Search Console resulting in over 2500 unique visitors a month
- Utilized Cloudflare caching system and optimized site-wide accessibility resulting in Lighthouse score consistently over 95%

🔗 Stack-Based CPU
AN ASSEMBLER AND EMULATOR FOR A CUSTOM STACK-BASED CPU ARCHITECTURE
Rust • Assembly

- Wrote stack-based emulator in Rust that supports 44 CPU instructions and graphics through 32x32 grayscale display buffer
- Wrote simple assembler to resolve labels and convert Assembly source files into custom binary machine code
- Proved custom instruction set Turing complete through 🔗 implementation of Conway's Game of Life from scratch in Assembly language

🔗 DBLess Password Manager
A HASH-BASED, DATABASE-LESS PASSWORD MANAGER
Python • JavaScript • HTML • CSS • Next.js

- Developed 🔗 custom cryptographic procedure based on SHA-256 to deterministically generate passwords on demand instead of encrypting them
- Built 🔗 cross-platform PWA with Next.js that loads 2FA tokens, generates passwords and copies them to user's clipboard for convenience

🔗 Legacy Protocol
SUBMISSION FOR DEFI THE CONVENTIONAL 2022
March 2022
JavaScript • React • Rust

- Won first place in Finance category of Canada's largest DeFi hackathon along with 2500$ prize as part of 3-member team
- Built 🔗 MVP smart contract backend from scratch in Rust with no prior experience in Web3, all within tight 36-hour timeframe

More on 🔗 GitHub and in 🔗 Portfolio

EDUCATION

University of Ottawa
BSC WITH HONOURS IN COMPUTER SCIENCE
Dropped out after first year

January 2023 • 15162e41ca1418b

CONTACT

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- github/ Bricktech2000
- linkedin/in/ emilien-breton

SKILLS

Programming Languages

Python • JavaScript • Rust • C++

Development Tools

Linux • Neovim • Git • GitHub

Frameworks

React • Node.js • Next.js • Express.js

Other Technologies

HTML • CSS • JSON • YAML • Markdown • LaTeX • C • Assembly • Raspberry Pi • Arduino • VS Code • Figma • Notion

OTHER

Languages

French *Native*

English *Native*

Spanish *Intermediate*

Russian *Elementary*

Interests

Electronics • 🔗 Robotics • 3D Printing • 🔗 Drone Building • Finance & Investing • Productivity • Music