Emilien **Breton**

EXPERIENCE

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

Currently working on a small-scale project for a client and getting up to speed with various technologies such as Web3 programming in Solidity, testing using Chai and Hardhat and keeping track of tasks using GitHub Projects.

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 1500 unique visitors a month
- Utilized Cloudflare caching system and optimized site-wide accessibility resulting in Lighthouse score consistently over 95%

🔗 Stack-Based CPU
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 assembler with macro support resulting in approximately 10% smaller Assembly source files
- 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 generates passwords on demand and copies them to user's clipboard for convenience

More on 🔗 **GitHub** and in 🔗 **Portfolio**

EXTRACURRICULAR

🔗 Legacy Protocol
SUBMISSION FOR DEFI THE CONVENTIONAL 2022   *March 18th 2022 — March 20th 2022*
                                                           JavaScript • React • Rust

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

CS Club Executive
PROMOTED TO AN EXECUTIVE OF THE UOTTAWA COMPUTER SCIENCE CLUB   *June 2022 — Present*
                                                                              University of Ottawa

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- Took initiative in wide variety of tasks such as redesigning our logo using using Figma, updating outdated information on our 🔗 website, refreshing our 🔗 Discord server, creating an internal Notion workspace to improve short-term plannig, and more

Group Chat Moderator
COURSE-SPECIFIC DISCORD SERVER CREATOR, OWNER AND MODERATOR   *University of Ottawa*

- Built and promoted eight Discord servers allowing total of over 1000 students to communicate with their peers and share resources easily
- Improved moderation experience by creating 🔗 Discord bot to address groups of students based on specific criteria, extending flexibility of Discord mentions

EDUCATION

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

CONTACT

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- 🔗 https://emilien.ca/
- **github/** Bricktech2000
- **linkedin/in/** emilien-breton

SKILLS

Programming Languages

Python • Rust • JavaScript • C++

Development Tools

Linux • Vim • Git • GitHub

Frameworks

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

Other Technologies

HTML • CSS • JSON • YAML • Markdown • LaTeX • C • Assembly • Raspberry Pi • Arduino

OTHER

Languages

French	*Native*
English	*Native*
Spanish	*Intermediate*
Russian	*Elementary*

Interests

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