Emilien **Breton**

EXPERIENCE

Zeptile Software

SOFTWARE ENGINEER — WEB3 · *Remote from Ottawa | October 2022 — Present*

- Working on small-scale project and getting up to speed with various technologies such as Web3 programming in Solidity and testing using Chai and Hardhat.

VOLUNTEERING

Hack the Hill

DEVELOPMENT MANAGER — DEVELOPMENT TEAM · *Ottawa | May 2023 — Present*
DEVELOPMENT COORDINATOR — DEVELOPMENT TEAM · *Ottawa | November 2022 — May 2023*

- Contributed in developing open-source participant tracker built with Next.js and Prisma, used by over **1000 hackers** and **50 organizers** throughout hackathon.
- Collaborated with infrastructure and sponsorship teams to build and maintain internal payment portal powered by Stripe and React.js, allowing for over **20 000$** in sponsor payments to be processed.

uOttawa CS Club

CLUB EXECUTIVE · *University of Ottawa | June 2022 — Present*

- Collaborated with both other executives to brainstorm, organize and schedule a dozen events by giving talks and organizing workshops for over **100 students**.
- Reorganized Discord server of over **1000 members** by creating clearer roles and introduction channels, improving user experience and onboarding.

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 **5000 unique visitors** a month.
- Leveraged Cloudflare caching system and optimized site-wide accessibility resulting in Lighthouse score consistently over **95%**.

Atto-8 Microcomputer

A MINIMALIST 8-BIT MICROCOMPUTER WITH STACK-BASED MICROPROCESSOR · *Rust · Assembly*

- Implemented optimizing assembler, elementary disassembler and instruction-level emulator in Rust for custom stack-based architecture.
- Proved instruction set Turing complete through implementation of Conway's Game of Life from scratch in Assembly.
- Working on building microcomputer physically using 74HC-series logic chips and 3D-printed parts.

DBLess Password Manager

A HASH-BASED, DATABASE-LESS PASSWORD MANAGER · *Python · JavaScript · HTML · CSS · Next.js*

- Devised custom cryptographic procedure based on SHA-256 to deterministically generate passwords on demand without requiring encryption or password storage.
- Built cross-platform PWA with Next.js used by over **50 accounts** 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 and API from scratch in Rust with no prior experience in Web3, all within tight 36-hour timeframe.
- Worked in collaboration with Terraform Labs post-hackathon to officialize our protocol and secure additional funding prior to Terra Luna collapse.

More on GitHub and in Portfolio

CONTACT

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SKILLS

Programming Languages

Rust · Python · C · JavaScript

Development Tools

Linux · Neovim · Git · Fish · GitHub · Docker

Frameworks

React · Next.js · Node.js

Other Technologies

HTML · CSS · JSON · YAML · Markdown · LaTeX · C++ · Assembly · Raspberry Pi · Arduino · VS Code · Figma · Notion · Cloudflare

OTHER

Spoken Languages

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

Interests

Electronics · Robotics · 3D Printing · Mathematics · Drone Building · Finance & Investing · Productivity · Music