

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

- Building a community of **over 1000** computer science students at the University of Ottawa.
- Collaborating with both other executives to brainstorm, organize and schedule a few dozen events by designing marketing material using Figma and organizing workshops for over **100 students**.

PROJECTS

Atto-8 Microcomputer

A MINIMALIST 8-BIT MICROCOMPUTER WITH STACK-BASED MICROPROCESSOR

Rust • Assembly

- Designing ecosystem of hardware and software from logic chips upward: microarchitecture specification • microcode builder • gate-level circuit design • instruction-level emulator • optimizing assembler • assembly standard library • rudimentary C99 compiler.
- Built various utilities and demos running natively on microcomputer: heap allocator • C string handling functions • native Brainfuck compiler • Flappy Bird clone • Game of Life simulation.

Personal Website

A PORTFOLIO FOR SHARING VARIOUS PROJECTS

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%**.

DBLess Password Manager

A HASH-BASED, DATABASE-LESS PASSWORD MANAGER

Python • 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 | 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 • C • Python • JavaScript

Development Tools

NixOS • Neovim • Fish • Git • GitHub • Docker

Frameworks

React • Next.js • Node.js

Other Technologies

HTML • CSS • JSON • YAML • Markdown • LaTeX • C++ • x86 Assembly • Linux • GDB • 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