

Emilien Breton

EXPERIENCE

Zeptile Software

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

- Implemented various smart contracts in Solidity as per specification and ensured **100% test coverage** through Chai and Hardhat.

VOLUNTEERING

Hack the Hill

DEVELOPMENT MANAGER — DEVELOPMENT TEAM *Ottawa | November 2022 — Present*

- Leading development of open-source participant tracker built with Next.js and Prisma, used by over **1000 hackers** and **50 organizers** throughout hackathon.
- Built and maintained internal sponsorship payment portal powered by Stripe and React.js in collaboration with infrastructure and sponsorship teams, allowing processing of over **20 000\$**.

uOttawa CS Club

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

- Building 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 gates upward, including CPU architecture, assembler, C compiler and emulator, totaling over **400 hours** of work.
- Built various utilities running natively on microcomputer — heap allocator • string handling functions • native Brainfuck compiler • hex monitor • pixel editor
- Porting microcomputer design to hardware using discrete logic chips on breadboards.

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

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

CONTACT

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