

Emilien Breton

EXPERIENCE

Zeptile Software
SOFTWARE ENGINEER

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.

October 2022 — Present

Remote from Ottawa

Hack the Hill
SOFTWARE ENGINEER — INFRASTRUCTURE TEAM

- Collaborated with design, development and community teams to fix various issues on hackathon website and keep it up to date with event information
- Worked with infrastructure and sponsorship teams to set up and maintain sponsorship payment portal powered by Stripe and React.js

October 2022 — Present

uOttawa CS Club
CLUB EXECUTIVE

- 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- Took initiative in wide variety of tasks such as updating outdated information on club website, redesigning logo using Figma, refreshing Discord server, and creating internal Notion workspace to improve short-term planning

June 2022 — Present

University of Ottawa

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 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 loads 2FA tokens, generates passwords and copies them to user's clipboard for convenience

Legacy Protocol

SUBMISSION FOR DEFI THE CONVENTIONAL 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

March 2022

More on GitHub and in Portfolio

EDUCATION

University of Ottawa
BSC WITH HONOURS IN COMPUTER SCIENCE

Dropped out after first year

CONTACT

Ottawa, Ontario

613-913-9909

mail@emilien.ca

https://emilien.ca/

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