

Emilien Breton

EXPERIENCE

Hack the Hill

DEVELOPMENT COORDINATOR — DEVELOPMENT TEAM

University of Ottawa • November 2022 — Present

Zeptile Software

SOFTWARE ENGINEER — WEB3

Remote from Ottawa • October 2022 — Present

uOttawa CS Club

CLUB EXECUTIVE

University of Ottawa • June 2022 — Present

- Collaborated with two other executives to brainstorm, organize and schedule a dozen small-scale events in Ottawa by giving talks and organizing workshops for over 100 students
- Designed internal Notion workspace, improving short-term planning by providing single central platform to capture meeting minutes and track task progress

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%

Stack-Based CPU

AN ASSEMBLER AND EMULATOR FOR A CUSTOM STACK-BASED CPU ARCHITECTURE



Rust • Assembly

- Designed and implemented stack-based emulator in Rust that supports 44 CPU instructions and graphics through 32x32 grayscale display buffer
- Developed basic assembler to resolve labels and convert Assembly source files into custom binary machine code
- 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



- Devised  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

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 from scratch in Rust with no prior experience in Web3, all within tight 36-hour timeframe
- Collaborated with Terraform Labs to officialize our protocol and secure additional funding prior to Terra Luna collapse

More on  GitHub and in  Portfolio

EDUCATION

University of Ottawa

BSC WITH HONOURS IN COMPUTER SCIENCE


Dropped out after first year

- Admission scholarship — 95%+ average

November 2020

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 • Docker

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 • Cloudflare

OTHER

Languages

• French	Native
• English	Native
• Spanish	Intermediate
• Russian	Elementary

Interests

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