Guillaume Bournel

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EXPERIENCE

Backend developer | ***Rust, Python, AWS***   March 2022 – Present
Sun Zu Lab   *Paris, FR*
- Developed and maintained market data feed handlers for major cryptocurrency exchanges (Coinbase, Binance, Kraken, Bitfinex, Bitpanda, Bittrex, Gate.io, etc.).
- Designed and developed end to end market data collection and retrieval pipeline using Kafka (rust-rdkafka, pyo3) for some major cryptocurrency actors.
- Monitored production (using Prometheus and Grafana), maintained and developed internal tooling (VPN, data collection instances, Rust and Python registries, Gitlab CI/CD).
- Benchmarked and optimized market data collection and retrieval infrastructure, improved the speed of our internal order book implementation (made it up to 2x faster on some venues).
- Fixed a big performance bottleneck in the Python/Rust library used by financial analysts to access market data, which made it up to 30 times faster.
- Trained new team members on the Rust codebase.

Fullstack developer | ***Python, Typescript, React***   Jan. 2021 – Feb. 2022
Dashdoc   *Nantes, FR*
- Worked on every end of the codebase (backend using Python/Django, integrations using Integromat, frontend using Typecscript/React, mobile application using React native).
- Implemented various features ranging from small API or UI changes to bigger features such as a specific transport dashboard for a major client.
- Designed and implemented internal tooling for the sales team.

Fullstack developer | ***Python, Flask, Javascript***   Dec. 2019 – May. 2020
institut-sylvie.fr   *Nantes, FR*
- Designed and developed the entire website from scratch. Backend is handled by Flask. Frontend is built from HTML/CSS and vanilla JavaScript, persistent data is stored on a MySQL database, website is hosted on a AWS EC2 instance.

PROJECTS (all my projects can be found on my website and on github)

guimauve.io | *Rust, Yew, Actix, Diesel*   June 2020 – Present
- I maintain an active blog discussing anything related to what I encounter during project development. I also write tutorials and guides. I built the website from scratch using Rust, Yew (frontend), Actix and Diesel (backend).

TCP implementation | *Rust, Linux*   Feb. 2024
- Rust basic implementation of the Transmission Control Protocol following RFC 9293. The objective was to learn about the protocol and have a simplified yet working version to run on top of ef_vi (Solarflare network adapters lowest level API).

Lock-free, thread safe ring buffer | *Rust*   Jan. 2024
- Rust implementation of a lock-free, thread safe ring buffer. I made this project to learn more about lock-free datastructures and unsafe Rust.

EDUCATION

University of Nantes   Nantes, FR
Mathematics - Physics - Computer Science   *Sept. 2017 – June 2018*

University of Poitiers   Poitiers, FR
Bachelor of Laws   *Sept. 2012 – June 2015*

TECHNICAL SKILLS

Languages: Rust, Python, C++, JavaScript, Typescript, HTML/CSS, Haskell
Frameworks: Actix, Yew, React, Django, Flask
Developer Tools: Linux, Git, Gitlab, GitHub, AWS, Kafka, Docker, Vim, Neovim
Libraries: tokio-rs, rayon, crossbeam, serde, diesel, aws-sdk, rdkafka, pyo3, vulkan