Eliott Coyac

Senior Software Engineer

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Skills

Software engineering
Architecture, Monorepo, CI/CD, Tests, Tooling, Data structures, Algorithms, Git

Node.js
NestJS, Express, Koa, Mongoose, Typescript, Deno, pnpm, Yarn

Svelte, VueJS, React
Extensive Svelte/VueJS knowledge, contributed to SvelteKit

MongoDB
Data modeling, Indexing, Aggregation, Replication & Sharding. Certification for MongoDB 4.4.

GraphQL
GraphQL Mesh, urql, @nestjs/graphql

C++
Qt, C, interest in Rust

Professional Experience

01/2022 – present	**Senior Backend Engineer** *Hugging Face* Hugging Face can be summarized as "The Github of Machine Learning". It's similar to Github but fully customized towards ML. Among other things, I helped make the platform cloud-friendly and scalable through the incredible usage growth. For example I transitioned the file-based git backend to Gitaly, a distributed git backend. I also made the MongoDB database the source of truth for the git repos and the S3 files for performance reasons, avoided locking resources and long operations, moved CPU-intensive tasks to workers, ... The technologies used are MongoDB, Typescript, Node.JS, and Svelte. The cloud provider is AWS.
06/2021 – 12/2021 France	**Senior Front-end Engineer** *PlayPlay (via Zenika)* I'm working on the PlayPlay editor, in VueJS. It's an editor to easily generate social media videos from a web application. My main concern for now is a feature allowing audio manipulation. I also launch several initiatives to upgrade the various dependencies of the project, to keep it fresh with the Vue ecosystem.
05/2021 Brest, France	**MongoDB expert** *Ownily (via Zenika)* Help redesigning the MongoDB models, choosing the Node.js framework, sample aggregation queries and global recommendations on hosting / backup / security.

| 09/2020 – 05/2021 | **Senior Fullstack Engineer** |
| Brest, France | *Arkea (via Zenika)* |

I worked as a developer on a Node.js / React / NestJS / GraphQL application deployed on AWS called Treckea. I reimplemented GraphQL support with GraphQL Mesh and contributed to @nestjs/swagger with a pull request for openapi links handling.
I also implemented a parser in Typescript 4.1 for GraphQL queries, in order to improve type safety.

| 2016 – 2020 | **Freelancer** |
| France | *Myself* ⧉ |

The last big project I did is Cap Financials ⧉ , a SaaS application that aggregates data on French companies from a vast array of sources to offer rich functionnalities such as detailed searches, portfolios, custom views / exports, comparison between companies, shareholder graphs...
The data sources contain of hundreds of millions of documents.
I handled all the programming / architecture / data modeling, I also ended up creating two NPM modules, one for fast CSV parsing and the other for a queue implementation in Node.js.
I used VueJS, Vuetify, Node.js and MongoDB as the main technologies. This software is used by prestigious French Universities and even the national French library.

Companies I worked for:
- Cap Financials
- Teractys
- Stoneraise
- Diabeloop
- Hachette
- Sentinelles du Web

Certificates

MongoDB 4.4 Certification ⧉

Contributions to Major Open Source Projects

typescript-eslint ⧉
typescript-eslint is a widely-used linter to make code clean. I added a formatting rule: @typescript-eslint/key-spacing for Go-like formatting of types & interfaces.

node-mongodb-native ⧉
I improved Typescript support for update queries on the official MongoDB driver.

@nestjs/swagger ⧉
I improved performance ⧉ and configuration ⧉ .

@sveltejs/kit ⧉
I fixed a cache invalidation problem I encountered after reporting it.

mongoose ⧉
Mongoose is a popular ODM for MongoDB. I fixed a bug regarding schemas when used in monorepos. As well as several minor contributions to improve types.

ts-proto ⧉

ts-proto is a Protobuf npm package. I improved the performance of base64 conversions.

tidepool-org/blip ⧉

Tidepool is a a non-profit organization to help Diabetes patients, with amazing software and hardware. I added internationalization capabilities to their React application.

Personal Open Source Projects

2018 – present	**BGS** ⧉ *Play boardgames online* A platform to play boardgames online. Supports wholly dynamic configuration, and live update of boardgames without a redeploy. Done with VueJS & Svelte, Node.js, Typescript, and MongoDB.
2009 – 2014	**Pokemon Online** ⧉ *Pokémon Battle Simulator* Successor to Pokémon Netbattle, a Pokémon Battle simulator that allows you to do battle with the first 5 generations of Pokémon. Had 1000+ simultaneous users on the main server in its heyday. The main technologies are Qt and C++, but there was plenty involved including a javascript engine, SQL, network, threading and coroutines, Node.js and an Android application.
2017	**Open Drive** ⧉ *Multiplatform Google Drive client* A google drive client done with Electron and Node.js. The motivation was the lack of Linux support of the official Google Drive client.
2017	**Mongo Locks** ⧉ *A redis lock with MongoDB* Locking mechanism using the MongoDB database. Also did a rate-limiting mechanism (for authentications, account creation, ...) called mongo-limiter.

Education

2014 Brest, France	**Master in Engineering, Computer Science** *IMT Atlantique* ⧉

Interests

Svelte	**Rust**	**Open Source**
Looks really good for green web applications	*Rust has plenty of new things in a compiled language*	*I've been in the Open Source world for more than 10 years*

Languages

French	**English**
Native	*Full working proficiency*