Ghislain Deffo

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Empiricist software development professional with expertise in designing and maintaining full-stack systems, aiming to deliver high-quality software solutions and contribute to a culture of innovation and efficiency. Measurable contributor to Open Source tooling with over 10K downloads, and 50+ GitHub stars.

Work Experience

Senior Full-stack Engineer

Volute   Jan 2023 - Present

- **Led the development** of user experiences (Text, A/V, Media) to facilitate communications within discussion forums.

- Coordinated across teams, both internal and external, to build and integrate new subsystems concurrently

- **Identified** user friction and **inquiries** by **parsing questions** within posts in the forums using an **LLM** (GPT-3.5) and reporting them, to indirectly increase user interactions by 20%.

- **Ameliorated user engagement** by leveraging Large Language Models with the **RAG** strategy to provide the ideal experience for searching through forums.

Full-stack Engineer

Volute   Jan 2022 - Jan 2023

- Sped up **GitHub Actions** build to detect and address issues quicker in the development process, from 12 min average to a **6 min** average

- **Revealed** business continuity gaps by developing Analytics widgets, using React, Recharts, Tailwind, NodeJs, and Azure Postgres Flexible Server.

- **Improved** system stability by implementing end-to-end type-safe wrappers for emitting and handling system events by Azure Event Grid, improving development and testing efforts by 30%

- **Led** efforts to migrate to Typescript, and change libraries and common practices to **improve maintainability**, eliminating severe bug reports from 1 per quarter to 0.

- Developed CLI tools and scripts, in Rust or Nodejs, to automate developer tasks, improving velocity by 25%

- Maintained an **AKS** (Kubernetes cluster) hosted on **Azure**, resolving region migrations, investigating memory leaks, debugging Kubernetes deployments, etc…

Front-end Engineer

Volute   Nov 2021 - Jan 2022

- Optimized application performance, **improving the Lighthouse score** from 17 to 82, achieving a speed index of 1.9

- Increased development velocity by moving from Create React App (CRA) v4 setup to Next.js 13, resulting in a **6x** reduction in build times.

- Implemented an audio/video meeting feature, with webRTC, to facilitate user collaborations, thereby increasing user engagement.

Full-stack Engineer

Project New Social LLC   Feb 2021 - Nov 2021

Small startup/team where I was a junior but my responsibility were like one of a Tech lead:

- **Designed and led** the development of a social media Progressive Web App to cheaply support **Mobile and Desktop devices from one code base** using Next.js, Node, Prisma, Postgres, and GraphQL

- Created and maintained a deployment strategy to serve our initial thousands of concurrent users for under 10 USD a month, using **Docker** containers run on a VPS with Docker Swarm

- Crafted reusable and **responsive UI** components using CSS, Typescript, React.js, and @material-ui to maximize on a reliable user experience

- Organized a typescript **monorepo**, using Turberepo, to reduce deployment and developer onboarding times by 30%

Core Java Instructor

CollaboraIT Inc   Jul. 2020 - Oct. 2020

- Enabled the senior instructor in training cohorts of Java developers monthly, teaching core concepts and design patterns, increasing the number of cohorts to pass through by 50%

- Taught advanced Object and Component design concepts such as **threading**, **polymorphism**, interface design, and **SOLID** principles.

- Designed a curriculum, in tandem with other instructors to rapidly upskill junior developers to be ready for professional projects in just 8 weeks.

PROJECTS (Open Source)

maccel
Mouse acceleration **driver** and kernel module for **Linux** with a simple Terminal UI.

- *C, Rust, Astro, Typescript*

rested
Language/**Interpreter** for easily defining and running requests to an HTTP server with **language server integrations**.

- *Rust, REST, Lua, LSP*

mynd
A todo app, in the terminal; simple and Frictionless, with an optional GUI Desktop App.

- *Rust, Tauri, Svelte, Typescript*

sciare
CLI tool to manage documents, allowing for semantic searching, and prompting using the **RAG** strategy.

- *Rust, Ollama, SQLite, llama2*

cnat
A CLI tool to systematically **change** all the **class names** in your codebase.

- *Rust, Typescript, Tailwind*

Skills

Expert: *Typescript • Node.js • REST • React.js • Next.js • HTML & CSS*

Proficient: *Rust • Cypher • Jest • Tailwind • Docker • Graphql • MongoDB • Neo4j • Git • Github Actions • Linux*

Familiar: *C • Lua • Bash • SQL • Svelte/SvelteKit • Turborepo • Neovim • Kubernetes • PostgreSQL • SQLite • Playwright • Cypress • Generative AI*

Education

Montgomery College

General Studies, STEM   Associates

University of Maryland

Computer Engineering   Ongoing