

# Sami Bentaiba

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## Summary

### Software Engineer

I'm a software engineer who evolved from a computer science student into a full-stack developer, then into a software architect and team lead. My journey has taken me through every stage of software creation — from learning computer fundamentals, algorithms, and system design, to mastering multiple programming languages and building complete software solutions. As an architect, I learned to design and implement scalable patterns and system plans, and as an operator, I developed workflows and maintenance strategies to ensure long-term software quality. Through this continuous growth, I've become a software engineer capable of planning, creating, and improving entire systems — bridging the gap between development, architecture, and operational excellence.

## Skills

### Development Operations

**Microservices (Applied)**: Designing applications as a collection of loosely coupled services. I explored this architecture in the H2-SpringBoot project.

**CI/CD (Applied)**: Continuous Integration and Continuous Deployment practices to automate the software delivery process.

### Frontend Development

**React (2+ years)**: React is a JavaScript library for building user interfaces. I've used React extensively to build single-page applications and components within Next.js projects, focusing on component-based architecture and state management with hooks and context API.

### Programming Languages

**Rust (<1 year)**: Rust is a language focused on performance and safety. Explored through the iShowOff project and interested in its potential for enterprise solutions.

**Go (Explored)**: Explored Go for its concurrency model and performance in backend systems.

### Architecture & Documentation

**System Architecture (Applied)**: Designing scalable systems, microservices, and database schemas. I use tools like Excalidraw and Figma to visualize code flows, design patterns, and architectural decisions.

**Technical Documentation (Applied)**: Creating comprehensive documentation for code, APIs, and system designs using Obsidian. I focus on explaining the 'why' behind technical decisions to facilitate maintenance and onboarding.

## Experience

### Full Stack Developer & Architect

*ITC (Proposed Donation)*

Jun 2024 - Sep 2024 · Remote

- ITC Hub - Internal communication and management platform

## Projects

**Mosquito Killer DZ** (Next.js, React, Tailwind CSS, shadcn/ui, System Architecture, Technical Documentation, Frontend, Software Engineer)

Designed to maximize conversion rates for a local e-commerce product. Focused on speed, mobile responsiveness, and a frictionless checkout process.

<https://mosquito-killer-2.vercel.app>

<https://github.com/samibentaiba/mosquito-killer-2>

**Algis** (Next.js, React, TypeScript, Prisma, PostgreSQL, NextAuth.js, Tailwind CSS, shadcn/ui, Linux Ecosystem, System Architecture, Technical Documentation, Full Stack, Backend, Software Engineer)

Working on Algis for a client in the agricultural sector has been a rewarding experience. The project involves complex data modeling with Prisma to handle UAPs, livestock, machinery, crops, and their relationships. I'm building a modern full-stack dashboard that replaces manual Excel-based workflows with a dynamic web application featuring authentication and role-based access. The repository is private due to client terms of service.

<https://algis-preview.vercel.app>

**C-Studio** (Electron, TypeScript, React, MinGW-w64, Node.js, Windows, Linux Ecosystem, System Architecture, Technical Documentation, Software Engineer, Desktop Development)

Building C-Studio was an exciting journey into desktop application development with Electron. The biggest challenge was bundling the MinGW compiler and ensuring it works seamlessly without any system configuration. I focused on creating a user-friendly experience for beginners learning C programming, with features like instant compilation and interactive terminal support.

<https://github.com/samibentaiba/c-studio>

**ITC Hub** (Next.js, React, TypeScript, Tailwind CSS, shadcn/ui, Prisma, PostgreSQL, NextAuth.js, React Hook Form, Zod, Nodemailer, Recharts, Linux Ecosystem, System Architecture, Technical Documentation, Full Stack, Backend, Software Architect)

Developing ITC Hub was a deep dive into full-stack Next.js development. The biggest challenge was designing the relational database schema with Prisma to handle complex relationships between users, departments, teams, and tickets. Implementing role-based access control (RBAC) with Next-Auth was a critical feature to ensure data security. This project solidified my skills in building secure, scalable, and data-intensive web applications.

<https://itc-hub.vercel.app>

<https://github.com/samibentaiba/itc-hub>

**ITCP** (React, Vite, CSS, Figma, System Architecture, Technical Documentation, Python, Frontend)

Worked as a Frontend Developer in a team with a backend developer and a UI/UX designer. This project enhanced my teamwork skills and my ability to integrate frontend components with backend APIs.

<https://itc-programming.netlify.app>

<https://github.com/samibentaiba/ITCP>

**Microservices & DevOps** (Java, Spring Boot, Angular, H2 Database, Microservices, Linux Ecosystem, System Architecture, Technical Documentation, Backend, DevOps)

Expanded my skillset into backend and DevOps by working with Java Spring Boot and microservices. This project gave me a deeper understanding of full-stack architecture and database management.

<https://github.com/samibentaiba/H2-SpringBoot>

**iShowOff** (Rust, GitHub Actions, CI/CD, Linux Ecosystem, IDEs & Editors, System Architecture, Technical Documentation, DevOps)

This was a valuable learning experience with GitHub Actions. By forking and customizing this project, I gained hands-on experience with CI/CD pipelines, automated releases, and integrating dynamic content into my GitHub profile README.

<https://github.com/samibentaiba/ishowoff>

## Education

**Master's Degree in Software Engineering**

USTHB, 2023-2025

**Bachelor's Degree in Computer Science**

USTHB, 2020-2023