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

Pipeline Manipulation (Applied): Using ngrok for exposing local servers and manipulating pipelines for webhook testing. Used effectively in the AiHorizons project.

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

Git & GitHub (1+ year): Git is a distributed version control system. I use Git and GitHub daily for version control, collaboration, and managing code changes across projects, including using GitHub Actions for CI/CD.

GitHub Actions (<1 year): Automating software workflows with CI/CD pipelines directly in GitHub. I use it for automated testing and deployment.

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

Docker (<1 year): Docker is a platform for developing, shipping, and running applications in containers. Used to create consistent development environments.

Vercel (<1 year): Vercel is a deployment and collaboration platform for frontend developers. I use Vercel to deploy and host web applications, leveraging its serverless functions and edge network.

Linux Ecosystem (Mastered): Deep mastery of distributions like Arch, Ubuntu, Fedora, Debian, Kali, Mint, and Nix. Proficient in shell scripting and system configuration.

Unix Systems (Familiar): Experience with macOS and OpenBSD, leveraging their stability and Unix philosophy for robust development environments.

Windows (Proficient): Used primarily for design collaboration (Figma) and compatibility testing, managing development limitations with custom configurations.

Frontend Development

React (1+ year): 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.

Next.js (<1 year): Next.js is a React framework that enables server-side rendering and static site generation. I've used Next.js to build performant and SEO-friendly web applications, leveraging its file-based routing system and API routes in projects like my portfolio, ITC Hub, and Algis.

TypeScript (<1 year): TypeScript is a strongly typed programming language that builds on JavaScript. I use TypeScript in most of my projects (portfolio, c-studio, algis, itc-hub) to ensure type safety and improve developer experience.

Tailwind CSS (<1 year): Tailwind CSS is a utility-first CSS framework. I use Tailwind CSS to rapidly build custom designs without leaving HTML, focusing on responsive design and component consistency in my Next.js projects.

shadcn/ui (1+ year): A collection of re-usable components built using Radix UI and Tailwind CSS. I use it to build accessible and customizable UIs in my Next.js projects.

HTML & CSS (1+ year): Core web technologies for structuring and styling web content. Used in all web-based projects.

Vite (1+ year): Vite is a build tool that aims to provide a faster and leaner development experience for modern web projects. I use it for my React projects.

Angular (<1 year): Angular is a platform for building mobile and desktop web applications. I have experience with it through the H2-SpringBoot project.

Electron (1 year): Electron is a framework for creating native applications with web technologies like JavaScript, HTML, and CSS. Used to build the C-Studio IDE.

Backend Development

Node.js (1+ year): Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine. I've used Node.js for server-side logic in Next.js applications and for scripting, including within the c-studio Electron project.

Express (1+ year): Express is a minimal and flexible Node.js web application framework. Used for building RESTful APIs.

PostgreSQL (<1 year): PostgreSQL is an advanced, open-source relational database. I've used PostgreSQL with Prisma for data storage in projects like ITC Hub and Algis.

Prisma (<1 year): Prisma is a next-generation ORM for Node.js and TypeScript. I use Prisma to interact with databases (PostgreSQL and SQLite) in projects like ITC Hub and Algis.

SQLite (<1 year): SQLite is a C-language library that implements a small, fast, self-contained, high-reliability, full-featured, SQL database engine. Used for local development in the Algis project.

Java (<1 year): Java is a high-level, class-based, object-oriented programming language. I use it for backend development with Spring Boot.

Spring Boot (<1 year): Spring Boot is an open source Java-based framework used to create a micro Service. I use it to build robust and scalable backend services.

Next.js (<1 year): I leverage Next.js for full-stack development, utilizing API Routes and Server Actions to build secure and scalable backend logic directly within the application.

NextAuth.js (<1 year): A complete open-source authentication solution for Next.js applications. I use it to handle secure user authentication and session management.

Laravel (Explored): Explored Laravel, a PHP web application framework, for building robust and elegant backend applications with its expressive syntax and powerful features.

Programming Languages

TypeScript (Familiar): My primary language for web development, ensuring type safety and code quality.

JavaScript (Familiar): Deep understanding of ES6+ features and the core language concepts.

C (Familiar): I am very familiar with C, using it for system programming and understanding low-level concepts. It's the core language supported by my C-Studio IDE.

Bash (Familiar): I use Bash scripting for automation and managing development environments.

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.

Python (Explored): Explored Python for scripting and data processing tasks.

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

C++ (Explored): Explored C++ to understand object-oriented programming at a system level.

C# (Explored): Explored C# for desktop and game development concepts.

Haskell (Explored): Explored Haskell to understand functional programming paradigms.

PHP (Explored): Explored PHP for server-side web development and understanding dynamic web applications.

IDEs & Editors (Mastered): Mastery of Neovim, VS Code, and Nano with custom keybinds, LSP tuning, and profiles. Experienced with JetBrains, Emacs, and CodeBlocks. I maintain a custom Neovim config (github.com/samibentaiba/nvim).

Architecture & Documentation

Figma (Collaborative): Learned through collaboration with UI/UX designers to implement pixel-perfect designs and understand design systems.

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.

Source Code Analysis (Applied): Deep dive into complex codebases and documentation (e.g., WordPress core) to understand best practices, reverse engineer logic, and implement robust solutions.

Experiences

Full Stack Developer & Architect
ITC (Proposed Donation)
Jul 2025 - Present · Remote

• ITC Hub - Internal communication and management platform

Software Engineer
Self-employed/Freelance
Oct 2024 - Present · Remote

• Mosquito Killer DZ - High-conversion landing page

• COD Simulation - E-commerce ROI calculator

• Remdani Dental Center - Clinic website

Active Member & Developer
ITC Programming Club
Dec 2024 - Present · Algiers, Algeria

• ITCP Website

• ITC Talks Platform

Frontend Developer
CSE USDB promo 2023
Oct 2024 · Algiers, Algeria

• CSE Hub

Projects

COD Simulation Dashboard (Next.js, TypeScript, Tailwind CSS, shadcn/ui, Lucide React, Frontend, Software Engineer)

Built this tool to help e-commerce business owners visualize their expenses and profits. It focuses on providing a clear, real-time financial overview.

https://calculator-delta-flax.vercel.app
https://github.com/samibentaiba/calculator

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

Remdani Dental Center (React, Node.js, Tailwind CSS, Linux Ecosystem, Frontend)

Collaborated as a Frontend Developer on this project, working closely with the backend developer and deployment lead. I also contributed to the backend development with small commits, gaining exposure to the full stack.

https://ramdani.vercel.app
https://github.com/ismail-devmaster/finalProjectFe

Sunrise Energy (Next.js, TypeScript, Prisma, Tailwind CSS, shadcn/ui, Frontend, Software Engineer)

This project allowed me to focus on creating a professional and visually appealing interface for a corporate client. I utilized Next.js for performance and SEO, ensuring the site is fast and discoverable.

https://github.com/samibentaiba/sunrise-energy

AiHorizons (React, TypeScript, Tailwind CSS, Vite, Figma, Pipeline Manipulation, Frontend)

This was a high-intensity project where I collaborated closely with a backend developer and a UI/UX designer to deliver a polished product in a very short timeframe. It tested my ability to work under pressure and coordinate effectively with a team.

https://ai-horizons.netlify.app
https://github.com/samibentaiba/AiHorizons

ITC Talks (Next.js, TypeScript, Tailwind CSS, shadcn/ui, Figma, Frontend)

Collaborated with a UI/UX designer to bring the vision of ITC Talks to life. Focused on creating an engaging user experience and a seamless content management flow.

https://itc-talks.vercel.app

https://github.com/samibentaiba/itc-talks

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

CSE Hub (React, Vite, Figma, Frontend)
My first significant project as a Frontend Developer. I collaborated with a UI/UX designer to translate designs into code, laying the foundation for my career in software engineering.
https://cse-hub.netlify.app/home
https://github.com/samibentaiba/cse-hub

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

Bachelor's in Mathematics & Computer Science
USDB - Saad Dahlab University of Blida 1, 2023-2029 · In Progress

Baccalaureate - Technical Mathematics (Mechanical Engineering)
High School, 2019-2023 · Completed · 15/20
Certificate: https://bentaidev.vercel.app/certificates/Bachelor.png

ITC Tech Certificate
ITC Club, 2024-2024 · Completed
Certificate: https://bentaidev.vercel.app/certificates/itc-tech.png