

Benmerrouche Elmoatassim Billah

Software Engineer

📍 Bordj Bou Arreridj, Algeria

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🌐 LinkedIn

🐙 GitHub

🌐 Portfolio

Professional Summary

First Place Winner of the National Programming and AI Olympiad in Algeria. Software Engineer with over 3 years of professional experience, I have delivered impactful solutions for real clients and users. I'm driven by problem-solving, strategic thinking, and responsibility for results. Known for fast learning, reliability, and strong ownership, I focus on turning ideas into scalable solutions that create real value. I aim to contribute to high-performing teams that value autonomy, impact, and excellence.

Professional Experience

Freelance Full Stack Developer

2024 – Present

- Designed and delivered custom web and mobile applications, AI automation solutions for diverse clients.
- Managed project timelines, client communications, and deployment processes independently.

Software Engineer Intern (Remote)

February 2025 – April 2025

AiSpeak

- Contributed to AI-driven application development using React Native in European company environment.
- Collaborated cross-functionally with international teams using Jira, Microsoft Teams, and Notion.

Projects

MedCortex – Medical Education Platform

🌐 med-cortex.com

- Engineered backend for learning platform with 100,000+ medical questions designed to support 10,000+ students.
- Implemented custom study sessions, intelligent filtering, personal notes, and online payment integration with study-year-level-based subscription tiers (e.g., Year 1, Year 2 specific content access).
- Optimized performance through caching strategies and query optimization to eliminate N+1 problems.
- Evaluated technology trade-offs between Laravel and Express.js .

Rachmati – Embroidery Pattern Marketplace

🌐 rachmati.com

- Developed full-stack web and mobile application APIs for digital marketplace connecting embroidery designers with clients.
- Implemented subscription-based storefronts and Telegram-integrated product delivery system.
- Deployed on VPS with Docker containerization for production reliability.
- Gained practical experience evaluating database solutions (MySQL vs PostgreSQL) and selected optimal technology for use case requirements.

AcademicIQ – AI-Powered Learning Platform

🏆 AI Olympiad 2025 Winner

- Built personalized AI-driven learning system with adaptive content delivery based on student performance and knowledge gap analysis.
- Gained experience generating Mermaid diagrams through AI, implementing frontend rendering of Mermaid diagrams.

Nest Project – Intelligent Power & Security System

🐙 Repo

- Architected full system managing data flow between frontend, backend, AI module, and hardware components.
- Implemented WebSocket-based real-time dashboard for live monitoring and visualization.
- Secured system communication using HMAC authentication and encrypted data transmission.
- Designed event-driven architecture with webhooks to trigger automated alerts and notifications

Multi-Store Ecommerce Backend

🐙 Repo

- Built scalable multi-store backend with layered architecture strictly following SOLID principles.
- Applied Object-Oriented Design patterns with comprehensive UML system modeling.

Project Management System

🐙 Repo

- Developed system with role-based access control and JWT-based authentication including Google OAuth integration.

Municipality Platform

🐙 Repo

- Built web platform enabling citizen-to-municipality communication for submitting concerns and accessing news.

Task Management with Stripe Integration

🐙 Repo

- Automated CI/CD pipeline using GitHub Actions for reliable deployments.

Banking System Design

🐙 Repo

- Architected comprehensive banking system using C4 model and class diagrams for enterprise-level design.

- Multi-Hotel Management System

🐙 Repo

- Weather Website

🐙 Repo

- Library Management System

🐙 Repo

- Stock Management System

🐙 Repo

Skills

Programming Languages

PHP, JavaScript, TypeScript, Java, C, HTML, CSS

Frontend

React.js, Next.js, Tailwind CSS, Redux, Inertia.js

Backend

Node.js, Express.js, Laravel, RESTful APIs, WebSockets, Webhooks, Microservice architecture, CI/CD Pipelines, Message brokers

Mobile

React Native, Flutter

Databases

MySQL, PostgreSQL, MongoDB, SQL, SQLite

Tools & DevOps

Git, GitHub, Docker, Postman, Redis, n8n, Linux

Software Architecture & Design

System Design (High-Level & Low-Level), SOLID Principles, Object-Oriented Design, Design Patterns, UML, C4 Model

Languages

Arabic , English, French

Education

Bachir Elibrahimi University, Bordj Bou Arreridj, Algeria

Bachelor's Degree in Systems Information and Software Engineering

Certifications

- NVIDIA – Fundamentals of Deep Learning

Hackathons

Hackivate Hackathon

University of Bordj Bou Arreridj, 2025

Competitive Programming Hackathon

ESTIN Bejaia, 2025

Project 0 Hackathon

University of Msila, 2024