



# Bilal Belli

## IT Systems and Software Engineer (+3)

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Portfolio : [bilalbelli.tech](https://bilalbelli.tech)

### EXPERIENCE

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#### Software Engineering Consultant

**Upwork** - 2026 - Montpellier, France

- ◇ Redesign of a WordPress web application to NodeJS.
- ◇ Supporting clients in technical choices and the design of their software architecture.
- ◇ Resolution and correction of errors and bugs in a Java ERP application.
- ◇ Supervising a team of two developers on a CRM project integrating AI agents.

#### Software Engineer

**Berger-Levrault** - 2025 - Toulouse, France

- ◇ Designed a solution to automate the migration of **REST/JSON APIs** to **REST/Protobuf**.
- ◇ Developed tools in **Java** for implementing **gRPC** in the **Spring Boot** backend and **Angular** frontend.
- ◇ Applied perfective maintenance to the WeGF microservices platform by migrating its APIs to gRPC.
- ◇ Achieved up to 82% faster loading times in the WeGF application, validated through performance testing.
- ◇ Authored Confluence documentation: installation and user guides, migration steps, tests plan and results.

#### DevOps Engineer

**LIRMM & Pradeo** - 2024 - Montpellier, France

- ◇ Developed a tool in **Python** for **detecting** malicious behaviors in iOS applications.
- ◇ Designed a **decompiler** to reverse engineer iOS application MachO binary files.
- ◇ Automated algorithms for inter and intra procedural **static analysis** (Taint analysis).
- ◇ Conducted unit, integration, functional, and technical tests, achieving good software reliability.
- ◇ Wrote a scientific paper updating the state of the art in malware detection techniques.

#### Fullstack Web Developer - HR Management System

**AlgeriaPartners** - 2022 - Algiers, Algeria

- ◇ Delivered a web application (NodeJs, ExpressJs, Bootstrap) to manage company human resources.
- ◇ Designed the web application prototype and **UI/UX** interfaces in **Figma**.
- ◇ Designed the database schema, implemented functional requirements and deployed the app on Google Cloud.

### EDUCATION

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#### Master's Degree in Computer Science, Software Engineering

University of Montpellier

Montpellier, France

2024 – 2025

#### Engineering Degree in Computer Science, Computer Systems Engineering

Higher National School of Computer Science (ESI ex INI)

Algiers, Algeria

2019 – 2024

### TECHNICAL SKILLS

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- ◇ Python, Java, C, JavaScript, HTML, CSS, Node.js, Spring Boot, Angular, Bootstrap, Flask
- ◇ Database administration : SQL Server, PostgreSQL, MySQL, NoSQL (MongoDB, Firebase, XML)
- ◇ DevOps CI/CD : Git, Jira, Jenkins, Docker, Kubernetes, Ansible, Maven, Gradle
- ◇ Software testing : Postman, DevTools, Pytest, JUnit, Playwright, SonarQube
- ◇ Environments : Linux (shell, Ubuntu, Debian, Kali), VMware, GNS3, Nginx

## PERSONAL PROJECTS

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### **QCM Website Generator (link)**

- ◇ Developed a Java based project leveraging Model Driven Engineering (MDE) to automatically generate a QCM website from simplified human input.
- ◇ Defined two metamodels in Eclipse Ecore and implemented a custom DSL using Xtext.
- ◇ Performed model to model (M2M) transformations with QVT and model to text (M2T) code generation with Acceleo to produce the final HTML and JavaScript output.

### **Trendly - Tech Trends Website (link)**

- ◇ Integrated, filtered, and ranked results from multiple APIs to identify trending tech topics.

### **MediaPlayer - Web Application (link)**

- ◇ Tool for digital ad banners that allows displaying media elements with precise timing and order.

### **NetFilter - Chrome Extension (link)**

- ◇ Security tool that blocks malicious websites while browsing, based on an updated threat database.

## ACADEMIC PROJECTS

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### **NetBoost - Content Delivery Network Architecture Simulation**

- ◇ Simulated a CDN using GNS3 and virtual machines for : cache servers, an origin server and a backup server.
- ◇ Used Nginx as a reverse proxy, Varnish for caching, Bind9 DNS server and Apache2 as a web server.

### **Automatic PDF Summary Generator using LLMs**

- ◇ Developed a web application integrating Gemini and Ollama LLM's to : analyze and discuss document annotations, generating a concise final summary. (link)
- ◇ Achieved 73% accuracy compared to manually annotated summaries.

### **Convolutional Neural Networks (CNN)**

- ◇ Developed and trained two CNN models in Matlab for Diabetic Retinopathy classification : one for 5 severity levels and another for 3 categories. (link)
- ◇ Designed and trained a CNN model in Python to recognize arabic alphabet characters. (link)

### **Accelerated MRI reconstruction (MoDL)**

- ◇ Development of a hybrid Deep Learning and physics model to reconstruct MRIs. (link)

## EXTRA ACTIVITIES

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### **Online Course Author - Udemy (link)**

- ◇ Created a course explaining the principles of Virtual Reality and Augmented Reality.

### **IT Security Mentor - Shellmates Club**

- ◇ Introduced IT security to new club members.