

# Bilal Karakira

## Full-Stack Software Engineer

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## Experience

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### Soal Labs

#### Software Engineer

*Remote --- USA*

*September 2023 – May 2025*

- Developed and maintained a data analysis platform for internal data teams, using FastAPI, React, and PostgreSQL/MongoDB.
  - Integrated a Jira-based ticketing system and AI-driven insights to support decision-making
  - Integrated advanced search capabilities with Algolia and LangChain (using ChromaDB and pgvector).
  - Designed asynchronous tasks with Celery, RabbitMQ, and Redis for scalable background processing
  - Implemented authentication and authorization solutions using Auth0 and Casbin for RBAC.
  - Created and integrated Slack and Microsoft Teams bots to automate workflows and notifications.
  - Implemented OpenMetadata (OMD) to centralize metadata management across multiple BI tools (Knowi, Tableau, PowerBI) and data sources, enabling unified data discovery, lineage tracking, and governance across the entire data ecosystem.
  - Worked on third-party BI tool integrations: Knowi, Tableau and PowerBI, along with Snowflake for data Storage.
- In addition, contributed to the successful delivery of several client-focused projects, including:
  - **Pipeline Management Platform:** Developed a collaborative pipeline management platform tailored for M&A professionals, utilizing FastAPI, React, and PostgreSQL. The platform offers real-time deal tracking, customizable workflows, and advanced data management features to streamline the organization and prioritization of business opportunities. Key functionalities include flexible reporting tools, user role management, and seamless integration with third-party services, enhancing efficiency and collaboration across teams.
  - **StudentHelp Chatbot for a University:** Developed a chatbot assistant for university students using the open-source platform Danswer/ONYX, designed to answer queries directly from the university's official website. Focused on prompt engineering and classification models to improve the chatbot's response accuracy and relevance.
  - **Sales Operations Platform:** Contributed to the development of a collaborative sales execution platform designed to align buyers and sellers through structured project management. Built features using React (Next.js, Tailwind CSS), FastAPI, and PostgreSQL, supporting real-time collaboration, CRM integrations, and customizable workflows. Helped streamline the sales process by enabling teams to create tailored project plans, monitor deal progress, and improve communication—all within a unified interface.
  - **Political Advertising Marketplace and Campaign Management Platform:** Contributed to the frontend development of a Political Advertising Marketplace and Campaign Management Platform using React (Vite) for a fast and modern development experience. My responsibilities included implementing responsive UI components, integrating APIs, and managing state using React Hooks and Context API. I collaborated closely with the client's technical team to gather requirements, align on implementation details, and ensure seamless integration with backend services. Additionally, I participated in code reviews, performance optimization, and cross-team coordination to support the successful rollout of campaign features.

### BMB Move

#### Mobile developer Internship

*Baabda, Lebanon*

*July 2022 – August 2022*

- Developed a simple mobile application using XAML and C# with Xamarin.Forms. Focused on building a single functional page that demonstrated UI layout, basic navigation, and data handling. This short-term project provided hands-on experience with cross-platform mobile development and reinforced understanding of XAML-based UI design and C# backend logic.

## Education

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**BEIRUT ARAB UNIVERSITY**

Bachelor of Computer Engineering (GPA: 3.04)

*Beirut, Lebanon*

*September 2019 – August 2023*

- **Relevant Coursework:**
  - Programming I & II (C/C++/Java)
  - Data Structures and Algorithms
  - Object Oriented Programming
  - Digital Systems I & II
  - Computer Architecture
  - Cryptography and Information Security
  - Operating Systems
  - Embedded and Microprocessor Systems
  - Database Systems
  - Computer Networks
  - Software Engineering
  - Introduction to Artificial Intelligence and Machine Learning
  - Deep Learning

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## Skills

### Languages:

- Arabic – Native Language / Fluent
- English – Full Professional Proficiency
- French – Intermediate Proficiency

### Key Skills:

- Excellent Presentation & Communication
- Team Work / Coordination / Flexibility
- Project Management
- Feedback acceptance
- Fast learner