Firas Khalife

Full-Stack Software Engineer

AWS Cloud-Native Architecture • Distributed Systems • AI-Native Development

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Skills

Programming Languages: Java, TypeScript/JavaScript, Python, Scala, OCaml, Gallina
AI-Native Development: AI-assisted development, agentic pipelines, Claude Code, MCP servers, skills
AWS & IaC: Lambda, API Gateway, EventBridge, AppSync, SNS, SQS, SES, CDK, Terraform
Backend: Spring Boot & Cloud, Node.js, Scala Play, REST
Frontend: Next.js, React
Data: MySQL, PostgreSQL, MongoDB, Redis, Elasticsearch
Messaging: RabbitMQ, Kafka
Testing: Jest, JUnit, Mockito, Playwright, JMeter, Postman
CI/CD: Docker, Jenkins, GitHub Actions
Languages: Arabic (native), English (fluent, TOEIC 950/990), French (fluent)

Work Experience

CME Offshore – ***Beirut, Lebanon*** *Jul 2023 – Present*

Full-Stack Software Engineer (Full-time) *Jul 2024 – Present*

AWS – Node.js – Next.js – React – TypeScript – Scala Play – MySQL

- Led the design of the client's target platform architecture: modular micro-frontends and microservices, presented and defended before 30+ engineers and the head of engineering; adopted across all teams.
- Led AI-native development: made repositories AI-ready and built agentic pipelines, specialist agents and skills shared across teams, from ticket review to pull request; hundreds of tickets shipped in days, not weeks.
- Built dozens of AI tools and skills that make AI safe and efficient in teams' daily work, including MySQL and AWS MCP servers that keep access read-only and compliant by redacting secrets and PII.
- Designed event-driven serverless architectures on AWS using AppSync, SNS, SQS, and CDK, enabling reliable real-time communication.
- Designed a serverless email and two-way SMS backend on AWS handling 12,000+ real-time messages a day.
- Led Next.js micro-frontends (SSR, SEO); owned features across legacy React/Backbone apps on Scala Play.
- Led a weekly AI adoption series for 30+ QA engineers and company-wide talks and workshops (e.g. OAuth 2.0); mentored interns in 2024 and 2025 until they could own full-stack applications.

Full-Stack Software Engineer (Part-time) *Oct 2023 – Jul 2024*

Spring Boot – Spring Security – Keycloak – Elasticsearch – RabbitMQ – PostgreSQL – React – Python – Docker

- Owned backend architecture and delivery of an employee management app, secured with Keycloak (OAuth 2.0).
- Designed the PostgreSQL schema and Elasticsearch search; real-time updates via WebSockets and RabbitMQ.
- Built Python automation scripts saving 5+ hours a week.

Full-Stack Software Engineer (Intern) *Jul 2023 – Aug 2023*

Spring Boot – Spring Security – RabbitMQ – PostgreSQL – React

- Built an open-space management system of DDD microservices in Spring Boot, with a React admin dashboard.

Projects

Cloud-Native Grading Platform *Nov 2023 – Oct 2024*

Spring Cloud – Keycloak – RabbitMQ – Kafka – PostgreSQL – MongoDB – React – Docker – Terraform – AWS

- Designed Spring Cloud microservices (registry, config server, API gateway) with a database per service.
- Built in resilience: circuit breaking, rate limiting, retries, and RabbitMQ messaging with dead-letter queues.
- Secured it with Keycloak and added full observability with Prometheus, Grafana and Loki.
- Automated delivery with Jenkins and GitHub Actions CI/CD, Docker images and Terraform on AWS.

Python Extraction for the Rocq Prover, formerly Coq (final-year project) *Jan 2024 – Jun 2024*

Certifications

AWS Certified AI Practitioner *AWS, Oct 2025*
Master Microservices with Spring Boot, Docker, Kubernetes *Udemy, Oct 2024*
The Nuts and Bolts of OAuth 2.0 *Udemy, Jun 2024*

Education

Saint-Joseph University of Beirut – B.E. Computer & Communications Engineering *2019 – 2024*
Software track | GPA 3.7/4.0 (90/100) | Ranked 1st, Valedictorian