

Mahmoud Kebbi

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Professional Summary

Computer Engineering graduate with hands-on experience in backend development, cloud infrastructure, and DevOps automation. Strong background in designing secure, scalable systems using AWS, Terraform, and modern backend frameworks. Experienced in building production-grade APIs, optimizing cloud costs and performance, and integrating backend services with distributed and blockchain-based systems. Adept at working in fast-paced environments, collaborating with cross-functional teams, and delivering reliable, maintainable solutions aligned with real-world business needs.

Core Competencies

- Backend API Development
- Cloud Architecture (AWS)
- Infrastructure as Code (Terraform)
- DevOps & CI/CD Automation
- Secure System Design
- Backend Systems & API Integration
- Performance Optimization
- Blockchain-Enabled Applications

Experience

Blockchain & Backend Engineer - Part Time

IVX Labs (Sekai Finance), Beirut - Remote | August 2025 – Present

- Developing production-grade backend and smart contract logic supporting financial workflows, with features deployed to live environments following structured testing
- Strengthening platform security and audit readiness through Foundry test coverage, vault logic implementation, and remediation of identified issues
- Supporting two parallel projects by integrating on-chain components with NestJS backends, improving delivery speed, reliability, and operational stability

Software Engineering Intern

TEDMOB SAL | July 2025 - Aug 2025

- Engineered secure Express.js APIs with Redis caching and role-based access control, deployed on AWS ECS within a private VPC, improving backend reliability
- Developed a React and TypeScript club management platform with Redux Toolkit and Firebase, delivering booking workflows, admin dashboards, and controlled user access

Blockchain Software Engineer - Part Time

Xnance LLC | Sep 2024 - Mar 2025

- Designed and implemented end-to-end AWS infrastructure using Terraform modules for networking, IAM, ECS, Lambda, DynamoDB, ECR, and CI/CD pipelines, reducing manual provisioning effort by around 60%
- Developed and tested Solidity smart contracts supporting escrow-based workflows, governance mechanisms, and automated compensation logic, validated through unit tests and testnet deployments
- Automated contract deployment and verification using Hardhat and Ethers.js, reducing deployment time from hours to minutes while eliminating configuration errors
- Architected secure cloud environments including IAM models, API Gateway structures, database schemas, and CI/CD workflows to strengthen scalability and security

Cloud Software Engineer - Part Time

PMIGC | May 2024 - Jan 2025

- Built cloud infrastructure for a middleware REST API using Terraform and AWS services including API Gateway, Lambda, App Runner, load balancers, and secure networking
- Implemented CloudWatch dashboards, logging, and SNS alerts to enable proactive monitoring and maintain approximately 98% system uptime
- Optimized a Java Spring Boot backend by improving query performance, database indexing, and autoscaling rules, achieving approximately 20% performance improvement
- Standardized AWS infrastructure through reusable Terraform modules, improving deployment consistency, operational stability, and long-term maintainability

Education

Lebanese American University, Bachelor of Engineering in Computer Engineering | Dec 2025

Projects

Peer-to-Peer Energy Trading Platform – Final Year Project

- Designed a decentralized energy trading system using cloud-native microservices, blockchain smart contracts, and real-time chat enabling transparent energy exchange and automated settlement

VyraChain Backend MVP – Freelance Project

- Designed and deployed a medical data backend and blockchain-based identity system using NestJS, AWS, Terraform, and Polygon. Implemented backend workflows to process blockchain identity and consent events, map them to off-chain patient records, and store them in PostgreSQL for auditability and controlled access. Integrated services via RESTful APIs to enable secure data retrieval across healthcare systems.

Intelligent Executive Assistant – Course Project

- Developed an AI-powered Executive Assistant that integrates multiple external services via APIs to automate scheduling, email management, and executive summarization. Implemented structured data handling and persistence to support reliable task execution and traceability across workflows.

Certificates

- **AWS Certified Solutions Architect Associate**
- **Docker Foundations Professional – Docker, Inc**
- **Network Automation Professional Certificate – Arista Networks**
- **Data Engineering Associate – DataCamp**
- **Career Essentials in Cybersecurity – Microsoft**
- **Ubuntu Linux Professional Certificate – Canonical**

Technical Skills

- Programming & Backend: JavaScript, TypeScript, Python, Java, Solidity, SQL, C#, NestJS, Express.js, FastAPI
- Cloud & DevOps: AWS (ECS, Lambda, API Gateway, VPC, IAM, CloudWatch, Cloud Trail, ECR, CodePipeline, EC2, AppRunner, RDS), Terraform, Docker, GitHub Actions, Kubernetes
- Blockchain: Solidity, Hardhat, Foundry, Ethers.js, Upgradeable Smart Contracts
- Data & Security: PostgreSQL, DynamoDB, Redis, Secure API Design, Role-Based Access Control

Languages

- Arabic - Native
- English - Fluent