

# MALAK ESSAM

## Backend Developer

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malak-essamMalak-Essam

## EXPERIENCE

### Junior Backend Developer

#### Softplan

Mar 2025 – Ongoingremote

- Developed RESTful APIs using Spring Boot to support core business features, ensuring data integrity and optimal response times
- Designed relational database schemas and wrote optimized SQL queries using PostgreSQL and Spring Data JPA, improving query performance by implementing proper indexing and query optimization techniques
- Implemented secure authentication and authorization mechanisms using Spring Security and JWT tokens, protecting sensitive API endpoints and managing role-based access control for different user types
- Collaborated with cross-functional teams in Agile sprints to deliver features on schedule, participated in code reviews, and contributed to technical documentation and API specifications

## PROJECTS

### Real-Time Chat Application with Friend Management System

#### Personal Project

Backend: Spring Boot, Spring Security, Spring Data JPA, WebSocket (STOMP/SockJS), PostgreSQL, JWT, RabbitMQ

Frontend: Next.js 16, Tailwind CSS

- BackendFrontend
- Architected RESTful API with 15+ endpoints for user management, authentication, and chat operations, ensuring scalable and maintainable code structure
  - Implemented real-time bidirectional messaging system using WebSocket (STOMP/SockJS), achieving sub-100ms message latency with support for typing indicators and online presence tracking
  - Integrated RabbitMQ message broker for asynchronous notification delivery and offline message queuing, decoupling services and improving system scalability
  - Developed comprehensive friend management system with custom Spring Data JPA queries for user search, friend requests, and connection handling with optimized database indexing
  - Secured application with Spring Security and JWT-based stateless authentication, implementing token refresh mechanism, role-based authorization, and BCrypt password encryption

## EDUCATION

### B.Sc. in computer science

#### Cairo University

Sept 2018 – June 2022

## SKILLS

### Backend

JavaSpring BootSpring Data JPA

HibernateSpring MVCREST APIs

PostgreSQLMySQLSQLJWT

Spring SecurityHTTPWebSocket

RabbitMQ

### Frontend

ReactNext.jsTailwind CSS

### Tools & Testing

GitDockerMavenPostman

JUnitMockito

### Data Management

Bean ValidationException Handling

Transaction ManagementJSON

### Core Concepts

OOPDesign Patterns

SOLID PrinciplesAPI Design

Microservices

## LANGUAGES

Arabic

English