

# Mahmoud Salem

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## EDUCATION

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### Bachelor of Science

Alexandria University

Sep 2016 – Jul 2021

- Major: Computer and Communications Engineering
- GPA: 3.8/4.00 (Graduated with honors)

## EXPERIENCE

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### Software Engineer, Full-Time

Eventum IT Solutions

October 2023 - Present

- Resolved an in-memory cache overflow and optimized parsing performance by limiting the queue size and addressing bottlenecks in the parsing library, enabling parsing threads to scale with CPU cores, significantly enhancing system stability and throughput.
- Optimized Kafka messages structure across the project, reducing message size and enhancing serialization and deserialization speed, leading to improved consumer efficiency.
- Leveraged knowledge in Java, Spring, Kafka, Spark, Redis, React.js, Node.js, MYSQL, Elasticsearch, and Docker.

### Software Engineer, Full-Time

Ejada Systems Ltd.

June 2023 - October 2023

- Refactored critical parts of the code to be more generic, accommodating all Al-Rajhi Bank products. Resulting in a 50% reduction in project completion time and significantly improved performance and code quality.
- Documented most services used by the bank system, improving code comprehension, accelerating onboarding, and facilitating API and library usage.
- Leveraged knowledge in Java, Spring Boot, and MS SQL.

### Software Engineer, Full-Time

Egyptian Naval Forces

May 2022 - June 2023

Mandatory Military Service

- Maintained the document management system for the Naval Forces Command.
- Developed and integrated new features, and conducted thorough testing and debugging to promptly identify and resolve issues, improving the efficiency and effectiveness of document management processes and ensuring system reliability and stability.
- Leveraged knowledge in Ruby, Ruby on Rails, PostgreSQL, virtualization, microservices architecture, and demonstrated the ability to work under pressure and meet tight deadlines.

### Software Engineer, Intern

Nokia

August 2018 - October 2018

- Enhanced workflow within the project team, reducing time wasted on repetitive tasks, contributing to a 15% improvement in project delivery timelines.
- Implemented a tool using the PSC (Public Service Commission) device to run commands given in CSV format via SSH, saving outputs into an SQL database for GUI-based result browsing.
- Leveraged knowledge in Agile software development cycle, SQL, SSH, and C# using Microsoft Visual Studio.

## PROJECTS

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### Chest Abnormalities Detection | Python

- Developed an automated chest abnormalities detection system that examines chest X-ray images to detect multiple chest abnormalities and diseases, most importantly COVID-19, and predict their location.

### Xinu OS | C

- Implemented two scheduling policies (aging and proportional sharing), reader/writer locks with priority inheritance, a message passing system, TTY device driver, hierarchical file system, and pipe mechanism for the Unix-like operating system Xinu.

### SIC/XE Assembler | Java

- Developed a two-pass SIC/XE assembler with a GUI, allowing users to write or load Assembly code to obtain the object code and assembly report from a SIC/XE machine.

## SKILLS

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Languages: (Proficient): Java, C/C++, SQL (Familiar): JavaScript, Python, Ruby, HTML/CSS.

Technologies: Git, MySQL, Java Spring, Kafka, Spark, Redis, Elasticsearch, Docker, React.js, Node.js.