Mohamed **Khattab**

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Education

Faculty of Engineering, Alexandria University   *Alexandria, Egypt*
B.E. in Electronics and Communication Engineering   *Sep. 2019 - Jul. 2024*

Work Experience

Enozom   *Alexandria*
Software Engineer Intern   *4/7/2023 - 16/7/2023*

- Developed an immersive multiplayer Snake and Ladder game utilizing Node.js for the backend and React.js for the frontend. Utilized Sequelize ORM for efficient database connectivity, ensuring smooth data management with MySQL. Real-time communication was achieved through Socket.io to ensure synchronized gameplay.

Cyber Talent , Trend Micro   *Remotly Internship*
Cyber Security Intern   *July.2022 - Sep.2022*

- Familiarity with Web Penetration Testing techniques and their application to secure web applications
- Understanded the Cryptography concepts and their practical use in securing data.
- Acquainted with Network Security protocols and strategies to protect against cyber threats.

Egyptian National Telecommunication Institute   *Remotly Internship*
Cyberops Associate trainee   *June.2022- July.2022*

- Gained familiarity with Security Monitoring techniques to identify and respond to security events and incidents.
- Acquired knowledge in Threat Detection methods and tools to identify and prevent cyber threats in real-time .
- Understood common Network Attacks and their prevention strategies to safeguard against cyber threats.

IEEE SSCS Alexandria Branch   *Alexandria , Egypt*
Front End Developer   *OCT.2021 - OCT. 2022*

- Contributed to the development of the IEEE SSCS Alexandria branch Website, utilizing ReactJS and responsive web design practices to create a platform where users can take courses, read articles, explore fields, and apply for events

Projects

Diabetic Predictor ☐
                                                                                                            July. 2023

- Developed the Diabetic Predictor Website, An impactful web application leveraging cutting-edge AI and machine learning algorithms to predict diabetes likelihood in patients based on personalized health data. Utilized Flask, Node.js, and React to create an intuitive user interface and ensure seamless functionality. Facilitated efficient data storage and retrieval with Prisma, utilized as the ORM for managing MySQL database operations. Implemented secure authentication using JWT to prioritize user privacy and data protection.

Node.js Playground ☐
                                                                                                             May. 2023

- **Full-Stack Payment Integration Project :** Developed a full-stack Node.js and React app with PayPal and Stripe integration, connected to a MySQL database using Sequelize. Implemented JWT-based user authentication for secure user access and transactions.
- **Todo List Application:** Developed a Node.js and React app with Prisma for MySQL database connectivity, incorporating JWT-based user authentication.
- **Book App API:** An API that allows users to manage books and stores in a PostgreSQL database. Features include CRUD operations for books and stores, adding books to a store, retrieving all books in a store, and searching for books by title or author.
- **Notes App API:** A simple API that allows users to manage notes in local memstorage. Features include CRUD operations for notes.
- **Authentication system:** Built an authentication system using Node.js and Express to handle user authentication and session management.

Codeforces-Git-Integration ☐
                                                                                                             May. 2023

- Tool developed to streamline the management of solutions submitted on Codeforces and synchronization with GitHub. It provides an intuitive interface for selecting a Codeforces handle, downloading solutions, and uploading them to a GitHub repository.

Book Store Web App ☐
                                                                                                             Apr. 2023

- A web application for managing books in a bookstore, developed using Spring Boot, MySQL, JPA, and Thymeleaf. It allows users to add, edit, delete, and view books in the bookstore. The project features a fully functional backend and a simple UI.

Pintos

Mar. 2023

- Contributed to the development of PintOS, an open-source instructional operating system kernel developed by Stanford University, by working on the project's two phases as part of a college project. PintOS provides modular projects and complete documentation to introduce students to the major concepts of operating systems development.

Elevator System

Jan. 2023

- Developed an Elevator System Console App solution that efficiently handles multiple requests from different floors using object-oriented programming concepts and multithreading.

Parking lot system

Jan. 2023

- Developed a parking lot management system Console App using object-oriented programming concepts and design patterns such as strategy and singleton. The system is capable of handling different sizes of cars and checking for available parking spots. It includes features such as parking spot reservation, automatic ticket generation .

Problem Solving

Jan. 2023

- Solve more than 350 problems in Codeforces and LeetCode.
- Implement most of the Data Structures including advances DS such Red Black Trees.

Courses

Advanced DataBase Systems

ITI   *Feb 2023*

- Understood of the fundamentals of database management using SQL Server.
- Covered a range of topics, including database design, entity-relationship diagrams, data mapping, joins, normalization, aggregate functions, ranking functions, constraints, variables, and backup and restore operation.

Algorithm part I

PRINCETON UNIVERSITY , COURSERA   *Nov. 2022*

- Covered data structure from arrays to graphs , searching algorithms ,string algorithms

Computer Network Fundamental

Jul 2022

- Identified computer networks and its components, comparing between network types according to shape ,topology , area, management, defining the properties of the OSI and TCP/IP model, and Explained the function of each layer of the OSI model and TCP/IP protocols

Skills

- **Programming Languages:** Java, C++, Python ,JavaScript (Node.js, React), TypeScript
- **Concepts:** Object-Oriented Programming (OOP), Data Structures & Algorithms
- **Databases:** T-SQL, MySQL , PostgreSQL
- **Version Control:** Git, GitHub
- **Web Development:** Node.js, Socket.IO, React
- **Operating Systems:** Linux
- **Containerization:** Docker

Honors & Awards

| 2022 | **Google Swag**, 30daysofgooglecloud | *Online* |
| 2023 | **Finalist**, ACM Problem Solving winter Context at Alexanderia University | *Online* |

Languages

Arabic, native language
English, fluent