

Abdouallah Swelam

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EDUCATION

Concordia University

Montreal, QC

B.S. in Computer Science

January 2020 - May 2023

- **Related Coursework:** Data Structures & Algorithms, Objects & Design, Design and Analysis of Algorithms, Combinatorics, Machine Learning, Artificial Intelligence, Object-Oriented Programming

SELECTED PROJECTS

Task Manager Web Application

Ottawa, ON

JavaScript

May 2024

- Developed a full-stack task management application using React for the frontend, Node.js with Express for the backend, and MongoDB for the database.
- Engineered comprehensive RESTful APIs for CRUD operations, ensuring efficient data handling and frontend-backend interaction.
- Improved site reliability, security, and performance by optimizing database queries, enhancing server-side logic, and implementing secure authentication using JWT and bcrypt.
- Performed functional testing by interacting with the application as a user to verify that all features worked as intended.

Cyclist Tracking Application

Montreal, QC

Java

January 2022 – April 2022

- Partnered with a team of students to produce a web-based Cyclist Tracking application, applying the Waterfall Development lifecycle in Java.
- Co-developed and configured a POM file using Apache Maven to manage the building process, dependencies, and project structure of the application.
- Managed the implementation and testing phases of the Waterfall Development lifecycle, using Black-Box testing to ensure the User-Interface (UI) meets the specifications.
- Employed the observer design pattern to decouple the relationships between objects, providing robust and real-time location tracking to view the cyclists' paths.

Cyclist Tracking Application

Montreal, QC

MySQL

September 2021 – December 2022

- Collaborated with three engineering and science students from different fields to create a COVID19 vaccination website, using MySQL to implement a robust, efficient, and scalable platform.
- Applied MySQL by incorporating tables, relationships, and constraints to establish logical connections between entities, enabling seamless data organization, retrieval, and analysis.
- Implemented dynamic content generation using PHP to embed server-side code directly within HTML.
- Utilized JavaScript to employ seamless synchronization with MySQL, enabling real-time changes and updates between the website and the database.

VOLUNTEERING

IEEE WarHacks

Montreal, QC

- Trained 55 beginner students to use the Arduino platform, to improve understating of embedded systems and robotics concepts.
- Provided guidance and supervision to students as they constructed robot cars equipped with sensors, enabling them to successfully navigate intricate tracks.

Concordia Open house

Montreal, QC

- Managed an extensive tour of the university for prospective students and their parents.
- Participated in a presentation with peers, providing general information on academics and university life.

SKILLS

Programming: React, JavaScript, Node.js, Express, MongoDB, Java, Mongoose, HTML, CSS

Tools: Android Studio, IntelliJ, PyCharm, Eclipse, AWS, Jupyter Notebooks, Git, Visual Studio Code