

# Abdul Rahman El Mahmoud

Guelph, ON

(519) 760-2584 | [abdul.m0701@gmail.com](mailto:abdul.m0701@gmail.com) | [github.com/abdulm7](https://github.com/abdulm7) | [linkedin.com/in/abdulm7](https://linkedin.com/in/abdulm7) | [abdulm.me](https://abdulm.me)

## Education

### University of Guelph

Guelph, ON

Bachelor of Computing, Major in Software Engineering with a Minor in Business

Sept 2019 - May 2023

- **Achievements:** Dean's Honour List (8x) - Graduated with distinction - GPA: 85%
- **Relevant Courses:** Data Structures, Algorithms, Software System Development & Integration, Parallel Programming, Cloud Computing

## Skills

**Languages** C/C++, JavaScript, Python, Java, SQL, HTML/CSS, C#

**Developer Tools** Linux, Github, AWS, Azure, Kubernetes, React, Node, Terraform, Docker, Firebase, MySQL, Flask, .NET

**Relevant Skills** Data Structures, Object Oriented Programming, Communication, Problem-solving, Agile Practices

## Professional Experience

### Python Developer (Research Assistant)

Guelph, ON

University of Guelph

May 2022 - Aug 2022

- Led the development of a **Python** tool that renders a graph representing colour deficiencies of users based on environment and display. This tool was used as part of a greater system that aims to solve colour deficiencies on digital displays
- Refined and Optimized the visualization tool using the **Plotly** library to increase rendering speed by **9%** and fixed rendering glitches
- Conducted a thorough and investigative **literature review** on Dark Mode in Human Computer Interaction
- Presented comprehensive reports weekly to my supervisor in an **agile** work environment

### Full-stack Developer (Research Assistant)

Guelph, ON

University of Guelph

May 2021 - Aug 2021

- Developed a **Python** algorithm using **spaCy** to extract key information regarding data collection, retention, and sharing in **IoT** data agreements
- Streamlined and optimized the extraction algorithm for the web app, increasing run time speed by **26%**
- Designed and implemented a robust **MySQL** database to store company information, data policies, extraction queries, and query answers
- Spearheaded the Development/Deployment of the **Node.js** frontend and **Python** backend using **cPanel**, allowing hundreds of users to better understand how their agricultural IoT devices collect, retain, and share their data

### Web/App Developer

Guelph, ON

Muslim Society of Guelph

Dec 2020 - May 2021

- Revamped the MSofG's **WordPress** website by updating the aesthetic, adding a blog section, event handling, payment gateways for donations, and account management, testing all features initially on a **developer environment** before pushing it to production
- Initiated the development of the native mobile application using **Flutter** to make the MSofG services accessible on mobile
- Created a **PHP API** to serve as the backend for mobile, allowing the MSofG to update both the web and mobile app through WordPress
- Deployed the WordPress web app using cPanel and released the Flutter mobile app on the Apple App Store and Google Play Store, resulting in a **61%** increase in donations and a **33%** increase in community engagement

## Projects

### Country Reporter

June - Oct 2023

React, Python, Docker, Terraform, AWS

[github.com/abdulm7/Country-Reporter](https://github.com/abdulm7/Country-Reporter)

- A **cloud native app** that handles country data and follows the ETL process to generate comprehensive reports on a global and country scope
- Implemented **CI/CD** pipelines for application and infrastructure, using **Kubernetes** for scalability and **Terraform** for ease of maintenance

### What2Do

May 2023

Flutter, Python, Firebase, AWS Lambda, OpenAI

[github.com/abdulm7/What2Do](https://github.com/abdulm7/What2Do)

- A **mobile application** aimed to improve productivity by generating daily tasks based on your occupation and goals
- Utilized the **OpenAI API** to generate meaningful tasks and AWS Lambda to serve as the **back-end** of the application

### GPS Data Viewer

May 2022

C, Node.js, MySQL, HTML/CSS

[github.com/abdulm7/GPS-Data-View](https://github.com/abdulm7/GPS-Data-View)

- GPS Data Viewer is a **Node.js** web app that provides a platform to validate, parse, view, and add to GPX files
- Project features a **MySQL** database to store GPX files/data, allowing users access to their GPX data on any device

### E-Store Search

Jan 2022

Java (AWT, Swing, Util), JUnit, Gradle

[github.com/abdulm7/E-Store-Search](https://github.com/abdulm7/E-Store-Search)

- A **Java OOP** project that uses the java.swing library for the user interface and **Hash Maps** for an efficient and effective search functionality
- The project takes advantage of the **Gradle** build tool and incorporates **JUnit** tests to test functionality