

# Mohamed Aly

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## Education

### McMaster University

September 2019 – April 2024

Bachelor of Software Engineering (GPA **3.98**)

- **Courses:** Data Structures and Algorithms, Databases, UNIX, Web Development, Software Design

## Skills

<b>Languages:</b>	Python, Java, C++, JavaScript, Go, C#, HTML, CSS
<b>Technologies:</b>	MySQL, Docker, Kubernetes, TensorFlow, NodeJS, MongoDB, ReactJS
<b>Tools:</b>	Amazon Web Services, GCP, Git, Bash, Unix, Unity

## Experience

### Software Analyst Intern

Toronto, ON

Thales Group – Advanced Algorithms Team

September 2021 – December 2021

- Contributed towards the development of **CCDCI pipeline** using **Python** and **Batch**
- Implemented supporting tools to real-time systems in **JavaScript** and **C#**
- Designed, debugged and unit tested code base to achieve **100% code coverage**
- Interpreted **300+** simulation datasets using statistical methods
- Created automated scripts that reduced system testing time by **60%** using **Bash** and **Python**

### Software Engineer Intern

Toronto, ON

TELUS – Emerging Tech and IoT

January 2021 – September 2021

- Built ML demos using **Python**, **TensorFlow**, **OpenCV** to showcase the capabilities of **5G** networks
  - Developed a **ML model** that can identify prescription drugs based on shape, colour, and engraving
- Lead VR initiative by creating **9+ C# Unity apps** to explore new possible revenue streams
- Transformed raw data of **100+ users** in a research trial into presentable conclusions with Pandas
- Strong foundation of knowledge in **GCP / AWS** cloud services and the cloud ecosystem

## Projects

### Breathe Mental Health App, Hackathon Project

Tools: ReactJS, JavaScript, OAuth 2.0, GraphQL, DialogFlow

May 2021

- A **React** app used to help users control their breathing patterns and monitor their mental wellbeing
- Implemented GraphCMS **GraphQL API** to log and view the user's breathing sessions for visual analysis
- Implemented **OAuth 2.0** to provide authentication and authorization to Rest services and logging in

### Sudoku Solver with Backtracking

Tools: Python, Backtracking Algorithm

June 2021

- A Python program that can solve any sudoku puzzle recursively using backtracking algorithm

### 2048 Game

Tools: Java, Swing, Junit, MVC

April 2021

- 2048 Game in **Java** with **Swing GUI** following OOP principles and MVC patterns, tested with Junit

## About Me

Volleyball Player • History Enthusiast • Fisherman • Public Speaker • Mentor