Mahmoud Adas

Software Engineer - Egypt

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Education

Cairo University, Faculty of Engineering | *Egypt*   **Sep 2015 - Jul 2021**
B.S. in Computer Engineering

Tools

- **C**, **C++**, Go, Python, Java, Rust
- **Qt/QML**, React, Spring, Android
- SQLite, Docker, Linux

Experience

C++ Software Engineer   **Jun 2021 - Mar 2022, Jun 2023 - Now**
Atomica.ai (360Imaging) - Dokki, Egypt

- Currently developing frontend for new dental CAD application
- Joined teams: [internal tooling, launcher, clients, new CAD]
- Contributed to the launcher app, the **installer** of the whole suite of products
- Developed multiple internal C++ libraries
- Developed GUI tool to modify product **cloud data**
- Developed SQLite-**C++ boilerplate generators**
- Contributed to internal core libraries used across the company
- Maintained frontend of planner & segmentations apps

Software Engineering Intern · **Cert**   **Jul - Sep 2020**
Solectra - El Gouna, Egypt

- Maintained an **embedded system** that collects and analyses data from electric vehicles to report trips, total revenue, and energy
- Fixed several bugs, improved performance and prediction correctness, and added various tests

Projects

360Launcher   **Jan - Mar 2022**
Qt/QML/C++ app to install/update/launch main products and integrate with them

Library Editor   **Sep - Dec 2021**

- C++ (+ImGui) internal tool to modify/upload versioned metadata and information
- Helps product managers update domain-specific logic without new app release

DPSX-Sync   **Jun - Aug 2021**

- Qt/QML/C++ experimental Dropbox-like app to add sync and collaboration features
- Uses libgit and Gitea server for versioning and synchronization

C4IAN *(Graduation Project)* · **Repo**   **Feb - Jul 2021**

- Tactical Mobile ad-hoc network. Supports video/audio streaming and messaging
- ZHLS+ZID unicast, ODMRP multicast, and geo-based broadcast
- **Golang** router that integrates with the Linux network stack

OpenYSF · **Repo**   **Nov 2021 - Present**
A ysflight flight simulator clone, for learning and fun. Backward compatible with ysflight assets

Apex · **Backend** · **Frontend** · **Android** · **Testing**   **Jan - Mar 2019**

- Reddit clone, for web and android. Took role of **Devops** in team of 18

- Used Travis-CI for CI/CD, **GoogleCloud**, **Docker**, DockerCompose, and Datadog for monitoring

Koos · **Repo** · **Rust Rewrite**   **Jun 2019**
- Decentralized social media app, built on Fluence. AssemblyScript/Rust for server, React for frontend
- Won a Gitcoin bounty for the best app that uses Fluence's technology

Mini-Search-Engine · **Repo**   **Feb - Mar 2020**
Text and image search with trends detection. Used Java Spring and **React**

Match Reservation System · **Repo**   **Jan - Feb 2021**
Web application for Egyptian Premier League for seats reservation. Used **MongoDB, Nodejs** and React

NesEmu · **Repo**   **2019 - Present**
NES console **emulator** in C++. Hobby project

Cartoonization · **Repo**   **Oct - Dec 2019**
- Snapchat Clone written in Python draws stickers on live recordings of faces
- Implemented GUI, rendering stickers, and HOG algorithm
- Used Viola-jones/Hog to detect faces, and multiple **image processing** techniques to filter the input

RetroSoccer · **Repo**   **Jan - Mar 2019**
Multiplayer soccer game entirely in x86 IA32 MASM assembly with chat (serial communication)

Simple PDP--11 · **Repo**   **Oct - Dec 2019**
- Design and simulation of a CPU architecture similar to *PDP--11* in VHDL and Vunit for test benches
- Designed and implemented automated tests for the CPU

TheMistake · **Repo**   **Jan - Mar 2019**
- Maze solver car using flood fill algorithm on TIVA-C μc/Arduino-Uno with ultrasonic and IR sensors
- Implemented maze-solving and tested it

Paint-For-Kids · **Repo**   **Jan - Mar 2017**
C++ GUI application for kids to draw and play with shapes, with two game modes. OOP school project

Outbreak · **Repo**   **Jun 2018**
Java/libgdx clone of the classic game "Outbreak"

InventoryApp · **Repo**   **Jun 2018**
Android CRUD app to keep track of inventory items in a store