

Abdelrahman Farid

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Profile

A driven Computer Engineer with an insatiable hunger to build knowledge, experience, skills, and great products. I combine critical thinking, problem-solving skills, and domain-specific knowledge to make the difference between an okay product and an excellent one.

Fluent in: Arabic, English • **Military Status:** Completed • **Hobbies:** Filmmaking, Chess

Education

BSc **Cairo University**, Computer Engineering July 2022
• **Grade:** Distinction with Honors

Experience

Siemens DISW, Software Development Engineer Mar 2024 – present
• Received the **Technical Excellence Award** for multiple achievements in Optimization and Performance.
• Worked on **SolidoSim**, the market's leading Integrated Circuit Simulation Suite.

atomica.ai, Software Engineer III Dec 2021 – Feb 2024
• Developed a database browser/editor, with features such as: cloud sync, photo viewing, 3D Model viewing, an embedded scripting language to use for user queries, auto-generated ORM C++ code, and many more features.
• Developed a testing framework that can hook into a given application to record and playback scenarios for testing.
• Developed a C++ parser that detects and reports logical and breaking changes in source files.

Selected Projects

ENRoute (Graduation Project) C++, Python, Google OR-Tools
A national project, in conjunction with **Egyptian National Railways (ENR)**. It aims to optimize train timetables, and crew assignment according to rail capacity and operational constraints. It also provides a complete digital operations management system to track trains in real-time.

Compiler [↗](#) C++, Compilers
Implemented a compiler for a Turing-complete programming language. The compiler emits Quadruples and shows the Symbol Table on compilation.

OS Scheduler [↗](#) C++, Operating Systems
Emulates an operating system scheduler, with processes arriving and going through the scheduling lifecycle of running, being pre-empted, idling, etc.. using concepts such as: Inter-process Communication, Message Passing, Shared Memory, Memory Management, Process Scheduling Algorithms, Signals and Traps.

json-explorer [↗](#) C, C++, Parsing
Top-down LL(1) JSON parser C library, and a cross-platform JSON explorer application.

Technical Experience

Languages: C, C++, Python, C#, VHDL, Verilog, Golang, TypeScript, JavaScript

Technologies: GNU Make, CMake, Git, GitHub, GitLab, WinAPI, Linux, Node.js, SQLite, MongoDB, MySQL

Achievements and Certifications

Cairo University's Engineering Mathematics Research Forum, 3rd Place 2020
For research on applying Edge Detection to detect obstacles in pedestrians paths.

Coursera, Algorithmic Toolbox 2021