

AMR ABDELBAKY

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EDUCATION

The American University in Cairo (AUC) Egypt

Bachelor of Science in Computer Science, Minor in Mathematics

Undergraduate

May 2025

GPA: 3.71

Languages

JavaScript, Solidity, Rust, Python, Verilog HDL, C++

Software & Tools

Git, Docker, LaTeX, ReactJS

Course Work

Data Structures & Algorithms, Linear Algebra, Applied Probability, Statistical inference, Graph Theory, Compiler design, Database systems, Fundamentals of Machine Learning, Deep Learning, Computer Architecture, Operating Systems.

WORK EXPERIENCE

Technical Support

July 2023 - August 2023

Mountain View Developments

- Provided comprehensive technical support, offering troubleshooting expertise and resolving user queries promptly and effectively.
- Communicated directly with our users to provide quality service.

ACADEMIC PROJECTS

Air Temperature Forecasting Model, [Air Temperature Forecasting Model](#)

February 2024 - May 2024

Outdoor Air Temperature Prediction

Group Class Project

- Developed a machine learning model to predict outdoor air temperature using over 8.39 million data points from the **Climate Weather Surface of Brazil**. The model incorporates advanced pre-processing, several machine learning algorithms including Boosted Decision Trees and Neural Networks, showcasing deep insights into meteorological data handling and predictive modeling.
- Deployed the model for end-user interaction through Streamlit, making the prediction tool accessible for real-time use. Users can access and utilize the model at [Temperature Predictor](#).

Linux based bandwidth Network Monitor and Controller, [Network Monitor](#)

February 2024 - May 2024

Linux-Based Network Monitoring and controlling Tool

Group Class Project

- Implemented a comprehensive Linux-based network monitoring tool from scratch, featuring live data representation, historical data recording, and bandwidth throttling.
- Developed a graphical user interface (GUI) using the **Tauri** toolkit and **ReactJS** framework in **Rust** programming language for real-time monitoring and easy analysis of network data in addition to a command line interface (CLI).

Processor, [Processor](#)

September 2023 - December 2023

A RISC-V ISA Processor

Group Class Project

- Engineered and brought to life a high-performance processor adhering to the RISC-V ISA standards, meticulously designed on the **Nexys A7** platform utilizing the power of **Verilog HDL**.

RISC-V Simulator , [RISC-V simulator](#)

February 2023 - May 2023

RV32I ISA implementation

Group Class Project

- Implemented a robust RISC-V simulator supporting the RV32I Base Instruction Set using **C++**, demonstrating proficiency in both RISC-V architecture and advanced **C++** programming.

Calculator, [Calculator](#)

September 2022 - December 2022

Digital Calculator

Group Class Project

- Engineered and actualized a sophisticated calculator application on the **FPGA Basys-3** board, employing **Verilog HDL** to demonstrate advanced hardware design proficiency.

File Compressor , [File-Compressor](#)

February 2022 - May 2022

Huffman file compressor

Group Class Project

- Developed and deployed a file compression program utilizing the Huffman coding technique, effectively reducing file sizes with precision and enhancing data storage efficiency.

EXTRACURRICULAR ACTIVITIES

- **Head**, HR Committee, CSEA, AUC September 2023 - Present
- **Member**, Logistics Committee, 3al Raseef, AUC September 2022 - January 2023
- **Student Ambassador**, HR Committee, American University Scouting Team February 2021 - May 2021