

Mohamed Fekry Amin

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EDUCATION

The American University in Cairo

B.Sc. in Computer Engineering GPA: 3.9/4.00

Minor Degree in Mathematics GPA: 4.00/4.00

Cairo, Egypt

Feb 2020 – Dec 2024 (Expected)

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WORK EXPERIENCE

Technocolabs Software Technologies

Data Science & Machine Learning Engineer Intern

Remote

Feb 2023 – Apr 2023

- Worked on a Binary Classification task to predict a loan status and on a Regression task to predict a borrower's rate using a dataset of p2p Prosper loans and classical Machine learning techniques such as decision trees, random forests, and boosters for two and a half months and deployed the resulting pipelined model.

PROJECTS

OLX Database Navigation Application | [GitHub](#)

MySQL || Python

- Designed and deployed a relational database using MySQL workbench for used cars Ads in OLX Egypt website; the database was hosted on (db4free.net). A python program was developed to get +10 queries against the database to retrieve info about stored properties.

RISC-V 32IMC Processor | [GitHub](#)

Verilog

- Developed a full pipelined RV32 Processor using Verilog and ran it on a Nexys A7 FPGA Board.
- The CPU supports all integer instructions along with multiplication, division, and compressed instructions.

Deep Learning Network Intrusion Detection System | [GitHub](#)

Python || Keras

- Developed a deep Learning model for a network intrusion detection system using a CNN and RNN model.
- The final test accuracy for the UNSW-NB15 Dataset was higher than the state-of-the-art accuracy presented in the literature.

Disk Analyzer Application | [GitHub](#)

Tauri || Rust || JavaScript

- Developed a Disk Analyzer Application written in Rust and JavaScript using Tauri that scans and presents hard disk folders and components.
- The application can also be used as a disk manager as it allows different filters for presenting the scan results and allows some file manipulations such as deletion, copying, and cutting.
- The application runs on both Windows and Linux and provides very fast and accurate scan results like other popular disk analyzers.

Pac-Man Game | [GitHub](#)

QT || C++

- Built a Pac-Man game similar to the Google Doodle Pac-man game in C++ using QT and object-oriented programming principles.

SKILLS

Programming: C, C++, Python, Rust, SQL, HTML, CSS, JavaScript, NOSQL, Verilog, RISC-V

Technologies: Git, Qt, Tauri, MySQL, MongoDB, Docker, Linux, Vivado, Electric VLSI, LTspice, Multisim

Network Protocols: DNS, HTTP, UDP, TCP, IP

ML Libraries: NumPy, Pandas, TensorFlow, Keras, scikit-learn, Matplotlib, Seaborn

Languages: Arabic (Native), English (Professional)

RELEVANT COURSEWORK

Data Structures, OOP, Computer Networks, Graph Theory, Deep Learning, Operating Systems, Software Engineering, Database Systems, Information Theory, Digital Signals Processing, Linear Algebra, Probability and Statistics.

CO-CURRICULAR

AUC Google Developers Student Club

Machine Learning Mentor

Sep 2022 – Present

- Held a weekly workshop with other GDSC members that were made by the GDSC as part of a mentors team to give Machine Learning training sessions.
- Prepared and delivered multiple Machine Learning presentations on beginner and advanced topics such as Logistic Regression, NNs, and CNNs.

Undergraduate Work Study

Teaching Assistant

Sep 2022 – Jan 2023

- Worked as a teaching assistant for courses in both the Computer Science and the Mathematics Departments where I held weekly office hours and review sessions.

AUC Robotics Club

Supply Chain Member

Sep 2022 – Jan 2023

- Participated in multiple club events and workshops where I helped other members with many things like buying, classifying, storing electronics.