

Mohamed Alaa Hussein

Undergraduate Electrical Engineer

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Summary

Motivated Electronics and Communications Engineering student with strong practical skills in Python, Linux, SQL, and problem solving. Passionate about programming, simplifying technical concepts, and supporting others through mentoring and clear communication. Experienced in teamwork, delivering presentations, and managing small technical tasks such as command-line tools. Always eager to learn, improve, and build a solid foundation in software and data-related fields.

Education

- **Bachelor of Electronics and Communications Engineering at Higher Technological Institute - HTI, 10th of Ramadan City** 2022-2027 (Expected)
Grade: Excellent

Experience / Internships

Digital Egypt Pioneers Initiative (DEPI) Data Engineering Track (6 months)

(Ministry of Communications & IT – Egypt)

November 2025

- Built ETL pipelines using ...
- Designed data model / wrote SQL queries ...
- Automated workflows with ...
- Published code on GitHub / delivered capstone ...

Courses

- CCNA

June/Aug 2025

- **Cisco Certified Network Associate – Netova Academy (with Eng. Ahmed Tawfik)**
 - Learned core networking concepts, routing, and switching.
 - Practiced device configuration and network troubleshooting.
 - Covered security, automation, and enterprise network fundamentals.
 - Completed hands-on labs based on Cisco curriculum.

- **AI (Generative AI)** **January 2026**
- **Generative AI Explained — NVIDIA Deep Learning Institute (DLI)**
 - Covered generative AI concepts, applications, limitations, and responsible use.
 - Learned key terms: tokens, embeddings, transformers, and prompting.
- **LLM**
- **Building LLM Applications with Prompt Engineering — NVIDIA Deep Learning Institute (DLI)**
 - Applied iterative prompt-engineering best practices to build LLM-based applications.
 - Used LangChain to structure and compose LLM workflows.

Projects

- Command Line Task Manger (Python)

Skills

- Programming Languages: Python, C, C++
- Databases: SQL, MySQL
- Concepts: Data Structures, Algorithms, Object-Oriented Programming (OOP), Problem Solving, Data Modeling, ETL
- Linux
- MATLAB
- Microsoft Office (Word, Excel, PowerPoint)
- Problem Solving
- Git, GitHub
- Visual Studio Code
- Code::Blocks
- Jupyter Notebook
- Linux (Ubuntu)
- Apache Airflow
- Hadoop (HDFS, MapReduce)
- Apache Spark (PySpark basics)
- Excel
- Notion