

# Mina Albert Saeed Hermina

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Egypt

## SUMMARY

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A motivated computer science student specializing in IT, with a strong passion for GNU/Linux, networks, and operating systems. Enthusiastic about their evolution from inception to the present, I am eager to apply my knowledge in real-world projects. Seeking an internship in **Linux/Unix Systems Engineering or Programming** to contribute my skills while gaining hands-on experience.

## EXTRACURRICULARS

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### IEEE Cairo University Student Branch

March 2024 – June 2024

Networks Instructor

- Contributing to the development of technical content for the committee sessions and instructing real sessions for network committee members

## SKILLS & LANGUAGES

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### Technical skills & TOOLS:

- C, C++, Python, Java, OOP, and Data structures
- GNU/Linux, Bash, and docker
- Basic understanding of TCP/IP Protocols Suite
- Git, GitHub, vim, tmux

### Languages:

- Arabic: Native proficiency
- English: Intermediate proficiency (B1)

## PROJECTS

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### BigNum

April 2025 – June 2025

- Developed a C99 arbitrary-precision arithmetic library for cryptographic applications, with architecture-dependent 32/64-bit word representation using arean allocation for memory management.
- Designed a robust API interface by studying **OpenSSL** and **libtommath** libraries, and implemented core big number algorithms such as Euclidean division and modular inverse.

### Arena Allocator

February 2025 – March 2025

- Implemented a custom single-header region-based memory allocator in C using **mmap**, following the **stb-style headers**.
- Designed an efficient memory management system with features including **page-aligned** allocations, and memory usage tracking.

### imglib

November 2024 -- January 2025

- Developed a lightweight, portable C library for image manipulation on Unix-like systems.
- Followed the Suckless C coding style and wrote a portable Makefile, avoiding GNU-specific extensions.
- Implemented efficient pixel access using stride-based indexing for performance optimization.

### Linux Kernel With lockdep

April 2024

- Configured and built the Linux kernel to enable lockdep module which helps in debugging deadlocks in kernel space, replacing the new custom kernel into my system and using it.

### POSIX Compliant Shell Scripts Creation

September 2023 - September 2024

- Building POSIX-compliant shell scripts to automate daily tasks on my system like spinning up a virtual machine, unarchiving archive files and screen casting.

## EDUCATION

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Faculty of Computers and Artificial Intelligence, IT Department, Cairo university.

October 2021 – Current

- Bachelor's Degree in Information Technology

## CERTIFICATES

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- CCNA: Introduction to Networks
- CCNA: Switching, Routing, and Wireless Essentials

July 2024 – August 2024

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