# Mina Albert Saeed Hermina

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#### **SUMMARY**

I am a fresh Computer Science graduate specializing in IT, with a strong passion for GNU/Linux, Unix systems, and Systems Programming, and a deep interest in their evolution from inception to the present. I am seeking an internship in **Linux/Unix Systems Engineering or Programming** to contribute my skills while gaining hands-on experience in real-world projects. Available for immediate employment, as I am **exempted from mandatory military service** 

#### **EXTRACURRICULARS**

#### **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**

#### **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, and tmux

#### Languages:

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

### **PROJECTS**

<u>BigNum</u> April 2025 - June 2025

- Developed a C99 arbitrary-precision arithmetic library for cryptographic applications, with architecture-dependent 32/64-bit word representation using arena 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.

<u>Arena Allocator</u> February 2025 - March 2025

- Implemented a custom single-header **thread safe** 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 robust error handling system inspired by **ffmpeg** and stride-based indexing for efficient pixel access.

#### 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.

## **CONTRIBUTIONS**

- Unikraft:
  - Fixed documentation issues in the main **README** and **sub-READMEs** in examples directory for **unikraft/catalog** repo [#231] [#232]

## **EDUCATION**

Faculty of Computers and Artificial Intelligence at Cairo university.

• Bachelor's Degree in Information Technology

October 2021 - August 2025

# **CERTIFICATES**

July 2024 - August 2024

• CCNA: Switching, Routing, and Wireless Essentials

July 2024 - August 2024