

# Mina Albert Saeed Hermina

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## SUMMARY

I am a senior Computer Science student 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 read-world projects.

## EXTRACURRICULARS

IEEE Cairo University Student Branch Networks Instructor	March 2024 - June 2024
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- 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

- |               |                        |
|---------------|------------------------|
| <b>BigNum</b> | 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.
- |                        |                            |
|------------------------|----------------------------|
| <b>Arena Allocator</b> | 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.
- |               |                              |
|---------------|------------------------------|
| <b>imglib</b> | 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.
- |                                  |            |
|----------------------------------|------------|
| <b>Linux Kernel With lockdep</b> | 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.

## EDUCATION

Faculty of Computers and Artificial Intelligence at Cairo university.	October 2021 - Present
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- Bachelor's Degree in Information Technology

## CERTIFICATES

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|---|-------------------------|
| CCNA: Introduction to Networks                    | July 2024 – August 2024 |
| CCNA: Switching, Routing, and Wireless Essentials | July 2024 – August 2024 |