Software Engineer,
Linux System Programmer
Cairo, Egypt

S o h a i b   M o h a m e d

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Education

Giza, EG	Misr University	Oct 2019 – Aug 2022

B.S. in Computer Science. Misr University for Science and Technology – CGPA 2.75 / 4 – major GPA: 3 / 4

Experience

Software Engineer, Intern	Google Summer of Code	June 2022 - Oct 2022

Link: *GitHub* | **Read More:** *Portfolio*
- Added ≈10,000 lines of production-ready code written in **C language** and **bash script**.
- Ported 12 **eBPF** performance tools to the PCP framework.
- Built a framework to extend Htop columns by 75%, allowing for seamless integration of various performance metrics by implementing a feature called *Dynamic Screens*.

Open-Source Contributor	Linux Kernel	Htop	PCP	Feb 2021 – Present

Links: *Linux Kernel | Htop | PCP*
- Contributed to the Linux kernel development by submitting patches to **the kernel** to resolve memory leaks.
- Designed several successful new features requiring in-depth **research** on unfamiliar topics before coding.
- Implementing the *Dynamic Columns* and *Dynamic Meters* features resulted in an 80% improvement in overall *pcp-htop* system efficiency.

Projects

Linux From Scratch (LFS)		Jan 2022 – Feb 2022

Link: *GitHub* | **Read More:** *Portfolio*
- Bash scripts are written while working through the *Linux From Scratch* book.
- Gaining hands-on experience with building and configuring a custom Linux distribution from scratch.
Skills: linux system architecture; software development; debugging and problem-solving skills; bash scripting

Linux kernel modules		Nov 2021 – Jun 2021

Link: *GitHub* | **Read More:** *Portfolio*
- 80+ Linux kernel modules written while working through the *LKMC* repository and the *LDD3* book.
- Learning how to use kernel APIs helped me acquire practical **operating system** and **low-level** knowledge.
Skills: linux kernel API and subsystems; System programming; C; GNU Make

SimOS		Mar 2020 - Jan 2021

Link: *GitHub* | **Read More:** *Portfolio*
- Tiny operating system was written using pure **assembly** code only while working through osdev.org.
- Gained a deep knowledge of computer system architecture and design.
Skills: assembly language; system architecture; kernel development; low-level programming

Awards

- **Added as a Maintainer for *Performance Co-Pilot* Organization:** because of the proven track record of past open-source contributions: *https://github.com/performancecopilot*.
- **Recognized as a Top "Tested-by" Contributor to Linux Kernel 5.16:** *https://lwn.net/Articles/880699*.

Skills

C language (Advanced); Python; Linux; Docker; Git; Linux kernel; System programming;