

Software Engineer,  
Linux System Programmer  
Vienna, Austria

# Sohaib Mohamed

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## Experience

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<b>Software Engineer</b>	<b>LOYTEC electronics GmbH</b>	<b>Jan 2024 - Present</b>
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- Maintenance and expansion of an existing Buildroot/Linux environment.
- Development of new functions and modules at the operating system level.
- Software-side support for the hardware department in evaluating and commissioning new hardware.

<b>Software Engineer, Intern</b>	<b>Google Summer of Code</b>	<b>June 2022 - Oct 2022</b>
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**Link:** [GitHub](#) | **Read More:** [Portfolio](#)

- Added  $\approx 10,000$  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*.

<b>Open-Source Contributor</b>	<b>Linux Kernel   Htop   PCP</b>	<b>Feb 2021 – Present</b>
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**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

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<b>Linux kernel modules</b>	<b>Nov 2021 – Jun 2021</b>
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**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

<b>SimOS</b>	<b>Mar 2020 - Jan 2021</b>
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**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

## Education

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<b>Giza, EG</b>	<b>Misr University</b>	<b>Oct 2019 – Aug 2022</b>
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B.S. in Computer Science. Misr University for Science and Technology – CGPA 2.75 / 4 – major GPA: 3 / 4

## Awards

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- **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

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