

Mostafa Abdelaziz

Computer and Systems Engineer

Toronto, Canada
Willing to relocate if needed

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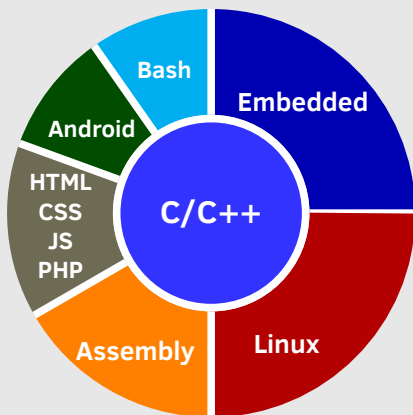
<https://iocoder.github.io>

[linkedin.com/in/mabdelaz](https://www.linkedin.com/in/mabdelaz)

About me

Computer software engineer with wide technical expertise in low-level programming, embedded systems, computer networks, database systems, and computer architecture.

Technologies



OS

GNU/Linux
FreeBSD
Windows



Languages

English (Very Fluent)

IELTS: 7.5 — CLB: 8

Arabic (Native)

Italian (Beginner)

Education

2011 - 2016 **B.Sc., Computer and Systems Engineering**

Alexandria University

Rank: Valedictorian

GPA: 3.94/4.00

WES Evaluation: Completed on March 2nd, 2018

Graduation Project: [FPGA computer based on MIPS architecture](#)

Experience

- 2018 **Software Engineer** [SoundHound Inc.](#), Toronto
Mainly working on high-end Speech Recognition and Natural Language Processing products. Some of the job responsibilities included:
1. Leveraging my **C/C++** programming skills to develop server-side **NLP** modules.
 2. Provide **Linux** technical expertise to the automation of various processes.
 3. Manipulating and managing large databases and information systems.
- 2017 **Research Assistant - Networks and Systems** [SFU](#), Vancouver
Implementation of an LTE base station using *Ettus B210 USRP* and *OpenAirInterface*.
- 2017 **Control Systems Engineer** Advanced HVAC Consultant, Cairo
Implementation of feedback control loops for **HVAC** systems using *Fupla* (function block diagrams) on *Saia Burgess PLC* devices.
The work included:
1. Control loops for airhand units (fans, valves, and sensors).
 2. Interfacing *Saia Burgess PLCs* and *Honeywell Eagle DDCs* using **Modbus** and **Bacnet/IP**.
 3. Instructing our teams on the implementation of electrical boards composed of **high-voltage relays** and networks of **PLCs**.
- 2016 **Software Engineer** Ejada Systems Ltd., Alexandria
Providing enterprise solutions to banks in the Middle East, including:
1. Implementation of **CRM** systems using **Oracle Siebel**.
 2. Developing **BigData** solutions using **Hadoop** and **Scala**.
- 2015 **RA Intern** SmartCI Research Center, Alexandria
Programming the storage system of a cognitive radio cloud, which consisted of Linux nodes with **ext2fs**, using **IP multicast** and **filesystem-aware data compression**.

Selected Projects

- [Quafios](#): An **Operating System** for x86 and MIPS. The system included:
 - Implementation of a UNIX-like **system call** interfaces.
 - **Device drivers** for PCI, USB, ATA, timers, interrupt controller, keyboard controller, and other hardware components.
 - Dynamic kernel-space and user-space **memory allocation** algorithms.
 - Implementation for **C library** routines.
 - A GUI, with a programmer-friendly API.
- CDP: **Linux kernel driver** implementation for a reliable Data Transfer Protocol.
- System for OS image distribution over **cloud network** using Frisbee.
- [Radio KAOS](#): **Cognitive Radio** with Dynamic Spectrum Sharing Engine.
- **Compiler** for a subset of **C** and **Java** Programming Languages
- Designed a [Linux kernel device driver and synchronization assignment](#) for OS course at Alexandria University.
- Liftroid: Visualized elevator Android interface with **AVR**.
- [Technical Report on Unified Extensible Firmware Interface \(UEFI\)](#).
- Systema: Educational system-level **programming language and compiler**.
- Hello World **BIOS**.