Mostafa Abdelaziz

Computer and Systems Engineer

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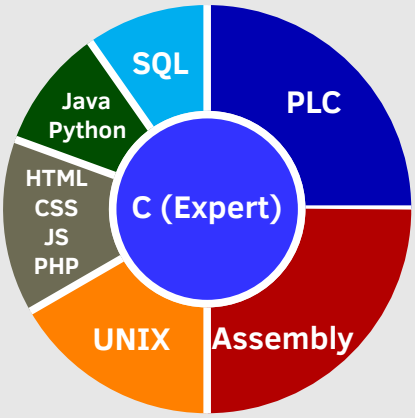
About me

Computer software engineer with wide technical expertise in software engineering, computer networks, database systems, computer architecture, and embedded systems.

Skills



OS

GNU/Linux ★★★★★
FreeBSD ★★★★☆
Windows ★★★★☆

Languages

English (*IELTS 7.5*)

Arabic (*Native*)

Italian (*Beginner*)

Courses

Academic Course Highlights: Programming, OOP, Software Engineering, Data Mining, AI, Data Structures, File Organization, Databases, Algorithm Analysis, OS, Compilers, Computer Architecture, Embedded Systems, and Networks.

Education

2011 - 2016 **B.Sc., Computer and Systems Engineering** — Alexandria University
GPA: 3.94.
Overall Ranking: 1st.
Graduation Project: FPGA computer based on MIPS architecture.

2008 - 2011 **High School** — Mubarak Secondary School, Alexandria
Overall Grade: 407.5/410 (99.36%).
Specialization: Mathematics.

Experience

2017 **Research Assistant** — Simon Fraser University, BC
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. Control loops for chillers and water pumps.
3. Interfacing *Saia Burgess PLCs* and *Honeywell Eagle DDCs* using Modbus and Bacnet/IP.
4. Developing interactive Human-Computer Interfaces using *Tridium controller* to interface the human operator with PLC logic.
5. Instructing our teams on the implementation of electrical boards composed of high-voltage relays and networks of PLCs and RIOs.
6. Troubleshooting and solving technical problems at the field.

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 (e.g., *identification of free blocks*).

Selected Projects

- Quafios: An Operating System for x86 and MIPS. The system included:
  - Implementation of a UNIX-like system call interface.
  - 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.
- Radio KAOS: Cognitive Radio with Dynamic Spectrum Sharing Engine.
- CDP: Reliable Data Transfer Protocol for Linux Kernel TCP/IP Stack.
- 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*.

Selected Awards

2017 CSED Golden Armor for the **Top Student** of 2015-2016 Class.
2017 Prof. Naeem Abou Taleb Award for **Top Student**.
2012 - 2016 **Certificate of Excellence**, Alexandria University.

– You can find the LaTeXsource code of my resume at http://www.github.com/iocoder/resume.