Bassant Hassan

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Education

Bachelor of Computer Engineering, The American University in Cairo (2020)
GPA: 3.832
Relevant coursework: Fundamentals of Cs, Programming Fundamentals (C++), Digital Design1, Digital Design2, Assembly Language, Software Engineering, Programming in Java, Digital Signal Processing, Analysis and Design of Algorithms, Data Structures and Algorithms, OS, Financial Accounting, Intro to Business, Engineering Economy, Fundamentals of Database Systems, Computer Networks, Distributed Systems, Mobile Applications, Embedded Systems, Internet of Things, Secure Systems Engineering

Minor in Business Administration, The American University in Cairo (2020)
Introduction to Business, Financial Accounting, Business Finance

IGCSE Certificate, Al Bashaer International School (2016) Score: 142

Academic Projects

- Designed a Java program that demonstrates and analyses different CPU/cache interactions
- Designed a program that displays on a webpage the varying waveforms of input and output variables using JavaScript and HTML
- Produced own graphical version of chicken invaders along with 2 team members in C++ / SFML
- Designed in Verilog a calculator that performs arithmetic operations on the user input and displays the output on a separate FPGA
- Designed a pipelined CPU model that supports compressed instructions and handles interrupts using Verilog
- Designed multiple Digital Circuits (schematic and layout) using Electric and LT spice
- Designed a program that executes basic RISK 5 instructions using C++
- Simulated the game Battlefield using Java
- Designed an application to speed up/slow down, remove noise, and eliminate echo from audio .wav files in python
- Simulated a simple shell, and solved the "Sleeping TA" problem using Linux VM
- Simulated a chip A* Router using Java and Soukup's Router using C++
- Designed a program that compresses and decompresses files using a Huffman tree in C++
- Created an Uber like website with driver, rider, and admin view/ real ride simulation/ an associated database using Node Js
- Set up multiple networks using GNS3 that included ARP, ICMP, DHCP, Static Routing, RIP, OSPF, TCP, DNS, HTTP, EIGRP, and Telnet while verifying and examining captured packets using Wireshark
- Used UNIX sockets and UDP to implement remote invocation middleware with peer-to-peer architecture, steganography-based image service, and added fault tolerance using C++
- Designed several IOS and Android applications including an Android "Smart Alarm" that collects traffic data using a maps API and sets alarms accordingly

Extracurricular Activities

Player at AUC's Track and Field Team (Eagles), AUC (Fall 2019-)
Represent AUC in Track and Field which involves races, relays, javelin throws, long jumps, high jumps, and numerous other related activities.

Projects Head at Enactus AUC (2018)
Was responsible for member recruitment, interviews, and selection Perform weekly meetings and organize outings to motivate members
Proposed project ideas for national competition along with my members
Planed execution of project and studied ways to minimize costs with team
Produced financial statements and project proposal forms
Implemented actual project which involved rental of venue, purchase of supplies, and hiring of workers in project along with team

Player at AUC's American Football Team (Titans), AUC (Spring 2017- Fall 2018)
Position: Cornerback / Linebacker (defense)

Participated in EFAF football season and was the team representative

Internal Communication Coordinator, AIESEC AUC (Spring 2017)
Motivated members using Facebook group and offline events
Designed several post templates and created them using Adobe Photoshop
Recruited and dismissed members after monitoring their performance and performing analytics

Organizing Committee Vice President for Marketing and Documentation, AIESEC AUC (Spring 2017)
Promoted offline campaigns and managed college relations
Designed T-shirts, notebooks, and other logistics using Adobe Photoshop
Interviewed members and made sure they are up to standards

Member at Model United Nations, AUC (2017)
Coordinated sessions by managing logistics and delegating tasks to other members Monitored and escorted delegates during arrival and breaks

Middle Manager for Marketing, AIESEC AUC (Fall 2016)
Managed Team by preparing weekly meetings, organizing several outings, and making sure they are on track and motivated
Designed & printed flyers for campaigns using Adobe Photoshop
Lead and organized campaigns by setting up the booth, preparing logistics, performing campaign
education sessions, and monitoring applications

One of the 4 main contestants in "El Abakera" TV-show, "El Kahera w El Nas" (2016)
Represented my school in an IQ competition against 16 other schools

Experience

Computer Networks Lab Teaching Assistant (Spring 2020)
AUC
Helped during the lab sessions, and had fixed office hours

Web Developer (Summer 2019 - Fall 2019)
The Center of Nano-electronics & Devices of AUC
Created a user-friendly interactive website that proposes ideal solutions to clients based of their needs while creating all the necessary pdf reports and financial statements, and created the necessary database using MySQL.

Fundamentals of Cs Teaching Assistant (Fall 2018)
AUC
Graded Assignments / had fixed office hours and lab sessions

Mathematics and Arabic TA (2015 – 2016)
Al-Bashaer International School
Explained and solved problems with students from past papers to prepare for IGCSE examination

English Private Tutor (2014 – 2016)
Ratio Centre for Education
Explained and practiced Grammar and writing to prepare students for IGCSE and TOEFL examinations

Skills

Languages:
- Fluent in spoken and written Arabic and English
- Some knowledge of French
- Fluent in Java, C, C++, MIPS, Verilog, Python, JavaScript, HTML, PHP, Node Js, and MATLAB

Computer:
- Excellent knowledge of Visual Studio, MARS, MS Office Applications, Vivado, NetBeans, Linux VM, LT Spice, Android Studio, and Anaconda
- Moderate Photoshop skills