



EDUCATION

May 2017

Carnegie Mellon University

B.S. Computer Science, GPA 3.67

Minor in Technical Writing

Oct 2016

CCNA: Routing & Switching



HONORS

- Qatar Foundation and CMU Academic Merit Scholarships
- Fifth Year Scholar 2016/2017
- Dean's list 4 semesters



COMMUNITY

- Member of Tadawoo medical non-profit organization
- Teaching Assistant (1 English and 4 Computer Science courses)
- Founder of the First-Year Students Mentorship Program
- Curriculum Developer in Alice Middle East Project
- Former Head of Academics and Computing Club President



EXPERIENCE

Head Orientation Counselor

Student Affairs (Qatar) | May '16 – Aug '16

- Planned a week-long orientation for incoming students in a team of 4
- Ran the orientation staff selection process to form a team of 30
- Designed the activities and trained the staff to run them

Undergraduate Research Assistant

Networking System Lab | May '15 – Jan '16

- Awarded a competitive grant for a proposal to research P2P Bluetooth and WiFi connections on Intel Edison and Raspberry-Pi devices
- Contributed findings to a paper submitted to MobiHoc and CIoT 2016

Summer Research Intern

Qatar Computing Research Institute | May '14 – Jul '14

- Wrote a python web-crawler to collect Arabic text samples for training
- Developed a real-time sound streaming iOS application show-casing online speech-to-text decoder with combinations of language and acoustic models



PROJECTS

XBEE-PAGERS | SMS for MCS12 Microcontrollers over Xbee

- Wrote embedded keypad and LCD device drivers to allow text I/O
- Designed and implemented a distance vector protocol permitting devices to route messages over dynamic Xbee connections

PEBBLES | Unix-like Kernel

- Developed a kernel supporting multiple virtual memory address spacing, preemptive multitasking, exception handling and main system calls
- Wrote the kernel's keyboard, console and timer device drivers
- Rigorously tested Pebbles using Simics as the main debugging tool

MINI-TUBE | Light-weight Video Content Distribution Network

- Developed an HTTP proxy which performs bit-rate adaptation for video
- Developed a simple DNS that implements load-balancing for a server either using round-robin or using geographic location indicated by the routing table built by processing the LSAs propagating the CDN.

TORRENT | P2P Bit-Torrent Network Peer

- Wrote a light-weight BitTorrent P2P file transfer protocol on top of UDP
- Implemented reliability using cumulative acknowledgements and SHA-1 hashing and congestion control using Slow Start, Congestion Avoidance, Fast Retransmit and Fast Recovery
- Used Spiffy network traffic simulator for testing and debugging the peer

LISO | An HTTP 1.1 Web Server

- Developed and tested a non-blocking HTTP web server that supports GET, HEAD and POST
- Added HTTPS via TLS and CGI functionalities. CGI was tested with Python WSGI applications.