MOHAMED EL SHATSHAT

THIRD YEAR MECHATRONICS ENGINEER

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WORK EXPERIENCE

OpenText
Software Developer
May 2017 – Aug 2017

- Developed features in **Node.js** for the Core desktop client and in **Python** for the file synchronization engine
- Enhanced automated tests with new features that made it easier to replicate the end-user and found several critical bugs in the sync engine
- Refactored old redundant and duplicate jQuery code into **AngularJS** code for the desktop client

Onion
Platform Software Engineering
Sept 2016 – Dec 2016

- Created a streamlined web-based setup wizard and console for the Omega2 using the **Polymer** framework in the lead up to sending out thousands of new devices
- Developed a **Shell Script** network manager for the Omega2 that is connects to nearby networks and automatically connects to saved networks on boot
- Used **Node.js** to write an application that parsed over 500,000 received pledges and organized the international shipping and costs of products

Imagine Communications
SQA Developer
Jan 2016 – May 2016

- Performed manual testing in the Onyx Web UI and worked with developers to fix bugs found in the installer and Web UI
- Wrote **Python** scripts that communicated through RabbitMQ to perform automated stress tests that were used leading up to the North American Broadcasting convention
- Worked as part of the Onyx team in an agile development environment and ran weekly demos of new features for team members and managers

Solus Robots
Mechatronics Engineer
May 2015 – Sept 2015

- Designed and manufactured multiple prototype robot arms using **SOLIDWORKS**, **CNC Routers**, and **3D Printers**
- **Soldered** Arduino shields and designed **PCB prototypes** for motor controller circuits

PROJECTS

Real Time Space Invaders
July 2016

- Created a **Real-Time** Space Invaders game in **C** on a Keil RTX evaluation board
- Used a multi-threaded architecture to handle the display refresh, game logic, peripherals, and score

MS Patient Monitor
Jan 2016

- Created application for Multiple Sclerosis patients to monitor their physical responses
- Designed a questionnaire in **Python** using PyQT and implemented a database to store the responses using **MySQL**
- Plotted and analyzed recorded data using Excel and wrote macros in VBA send emails when certain achievements are hit

SKILLS

Software:
Node.js, Python, Shell Scripting, C/C++, MATLAB, MySQL, ROS, Real-Time

Hardware: Soldering PCB Prototyping, Rapid Prototyping

Tools:
Windows, Linux, Git, Arduino, ANSYS, SOLIDWORKS, AutoCAD, OpenWRT, Docker

More:
Polymer, AngularJS, Karma, Simulink, nw.js

EDUCATION

University of Waterloo
Mechatronics Engineering
Sept 2014 – May 2019