

# MOHAMED EL SHATSHAT

UNIVERSITY OF WATERLOO  
THIRD YEAR MECHATRONICS ENGINEERING

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## WORK EXPERIENCE

### Onion

Platform Software Engineering  
Sept 2016 – Dec 2016

- Revamped web-based Setup Wizard and Console for the Omega2 using the **Polymer** framework
- Developed a **Shell Script** network manager
- Wrote extensive documentation for the Omega2 leading up to the fulfillment of Kickstarter pledges
- Created a **Node.js** application for formatting JSON data that would then be exported to a database

### Imagine Communications

SQA Developer  
Jan 2016 – May 2016

- Worked as part of the Onyx team to identify and fix bugs
- Wrote **Python** scripts to perform weekend stress testing

### Solus Robots

Mechatronics Engineer  
Jan 2016 – May 2016

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

## SKILLS

### Software:

HTML, CSS, Node.js, JavaScript, jQuery, Python, Shell Scripting, C/C++, MATLAB, MySQL, ROS

**Hardware:** Real-Time OS, PCB Prototyping, Soldering 3D Printing, CNC

### Tools:

Windows, Linux, Git, Arduino, ANSYS, SOLIDWORKS, AutoCAD, OpenWRT, MS Office

### Other:

Bootstrap, Polymer, Woodworking, Fluent in French

## PROJECTS

### Space Invaders

July 2016

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

### Midnight Project

Jan 2016

- **'Top 10'** at Hack for Health 2016  
Created application for Multiple Sclerosis patients to track their daily routines and plot their physical response
- Designed a questionnaire GUI in **Python** using PyQT and implemented a database to store the responses using **MySQL**
- Plotted the data using Excel and wrote macros in VBA to notify the user of changes via email

## VOLUNTEERISM

### WICS Hardware Workshop:

Led a demonstration of the Omega2 Linux Computer  
Nov 2016

### Primary School Prep:

Organized school equipment for the upcoming school year at Kingsley School in Etobicoke  
Sept 2015

## EDUCATION

### University of Waterloo

Mechatronics Engineering  
Sept 2014 – May 2019

- Currently completing my 3A term in the Mechatronics Engineering program