MOAAZ ELSAYED, EIT

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PROFESSIONAL SKILLS

- Skilled in **JavaScript, Go, Python, C/C++**, **C#, Java, HTML/CSS, Solidity and PHP** languages.
- Proficient in **Node.js/Express, React.js**, **React Native**, **Vue.js, Springboot, Serverless** and **.NET** frameworks.
- Experienced with **Google, AWS, Azure, Firebase, Watson** and **Android** APIs & SDKs; In addition to **OpenCV, Scikit-Learn**, **TensorFlow, jQuery, Flux**, **Reflux**, **Bootstrap, gRPC** tools & libraries.
- Skilled in databases and data storage solutions such as **MongoDB, SQLite, MariaDB, MySQL, Neo4J, Cassandra** and **Scylla** through university and work related experience.
- Familiar with **OpenAI Gym, Git**, **RegEx, OpenSSL, Linq, Unix Shell/Bash** and **Docker** tools.
- Proficient in **reading and interpreting design** and **engineering specifications** gained through work experience.
- Exceptional **communication** and **interpersonal skills** as well as **group** and **leadership skills** gained through university and work experience.
- Fast learner and high **analytical thinker** with skills to assess a variety of difficult problems.

EDUCATION

Computer Science for University Graduates December 2017
University Of Windsor, Windsor, ON | Average: A

Bachelor of Applied Science Mechanical Engineering- Co-op August 2015
University Of Windsor, Windsor, ON | Average: -A
UWSA Engineering Student Representative

EMPLOYMENT AND EXPERIENCE - CURRENT

Ford Motor Company Dearborn, MI March 2020 - Present
Senior Research Analyst | Emerging Technology & Innovation

- Project lead and lead developer in developing an **IOT device** that can be used in conjunction with anomaly detection **machine learning** models for predictive maintenance of cyclical machines.
- Developing POCs in the field of energy harvesting for IOT devices using **LoRa** and writing whitepapers regarding the underlying technology.
- Speaker at the Global IT Innovation Forum hosted by Ford.

CommuniCare Windsor, ON March 2020 - Present
CTO and Co-Founder

- Leading the development of a homecare management application. The application is being written in **Go/gRPC** and utilizes **AWS Lambda** and **Serverless** framework for **microservices**, **Cognito** for Auth and **Scylla** for data storage.

EMPLOYMENT AND EXPERIENCE - PREVIOUS

Ford Motor Company Dearborn, MI March 2017 - April 2020
Senior Security Engineer

- Led the development of a company-wide encryption/decryption application using industry standard encryption algorithms. Developed application in **C++** using **OpenSSL**, and library using **C#** & **Java**.
- Assisted in the development of Identity and Access Management (IAM) applications (i.e. ADFS Self Service).
- Assisted in the development of cryptography apps, such as SSL/TLS Certificate Product (Certman), Enterprise Certificates (Public Key Infrastructure - PKI).
- Engineered next-gen Enterprise Key Management and Hardware Security Modules for Ford.
- **Guest speaker** at the Global IT Learning Summit (GLITS) hosted by Ford.

Brave Control Solutions Windsor, ON Aug 2015 - Nov 2016
Controls Specialist | Software Developer | R&D

- Led the development of maintenance application written in **ReactJS** for use with parking garage machinery.
- Developed and Tested PLC software used in factory machinery using **Unity3D** environment in **C#**.
- Tested different case scenarios on vehicle routing for FATA parking garage using **mocha** tests with Unity3D.
- Programmed **JSON/XML parsers** to develop complete 3D models of a garage from database.

Amis Touring Windsor, ON Sept 2015 – Jan 2018
Co-Founder & CEO

- Led a team in the launch of a social media platform and touring application that connects travelers.
- Developed application for both **Android** and **IOS** through the **React Native** framework in addition to **Firebase** for database, authentication, messaging, and analytics.

Brave Control Solutions Windsor, ON Sept 2014 - Dec 2014
Controls COOP Engineer Technologist Student

- Led Essex Engine's Ford plant in an ECPL safety placard update project on crankshaft lines.
- Assisted the Controls Engineers in designing and updating project material through AutoCAD for Nemak, Ford, and Valiant projects.
- Ensured all design changes are tracked, logged, and submitted to the Design Supervisor.

Valiant Machine & Tool Inc. Windsor, ON Jan 2014 - May 2014
Mechanical Engineering COOP Student

- Assisted the Design Supervisor in preparation of all processing related material for customer meetings and presentations.
- Sketched, laid out, and detailed drawings to Valiant and customer specifications
- Ensured all design changes are tracked, logged, and submitted to the Design Supervisor.
- Attended and participated in all DFMEA meetings.

Kautex Textron Windsor, ON May 2013 - Sept 2013
Intern Validation Technician

- Setup and executed testing according to Testing Lab Work Instructions, Validation Engineer's guidance, customer specifications and QS9000.
- Wrote reports on test results for review of the responsible Validation Engineer.

RELEVANT PROJECTS COMPLETED

WinHacks Hackathon - 1st Place Winner Winter 2020

- Led a team in developing an application for elderly people as well as people "At-Risk" to make requests for essential needs in a pandemic. These requests will then be fulfilled by workers picking up groceries/medicine and dropping them off for contactless pickup.

PC Hacks (University of Toronto Hackathon) - 1st Place Winner Winter 2019

- Led a team to create a brail printer that uses motors on 3 axis to poke coordinated holes into paper making brail letters. The printer was built using items bought from the dollar store. An Arduino microcontroller was used to receive sentences and coordinate the motors to print the sentences in brail.

Deep Learning & Reinforcement Learning AI Projects Winter 2018

- Created several mini projects using **OpenCV** and **TensorFlow** libraries in **Python**. Used OpenAI Gym with TensorFlow to create and test a Reinforcement Learning model on a pole-balancing game. Created an object recognition program that recognized and counted fish using **OpenCV**.

Ford Blockchain Hackathon Fall 2018

- Led team in the build of **Ford Connected Ecosystem** for a **Blockchain** competition. This is a system that uses the concept of Multi-Signature Wallet to verify the authenticity of the source of information/ notification and the ledger to track these notifications. Developed program in **Solidity**.

Cisco Fintech Hackathon (Top 10 finalists) Fall 2017

- Led team in the build of a promise-tracking system called **TrusTD**. It is a service that tracks and resolves IOU promises through a ledger to help eliminate micro transactions. It incorporates IoT to suggest the right time and place to pay for any unresolved promises.

Hack the North Hackathon (Bloomberg 'Best App' Mini Prize) Fall 2017

- Helped create app named **Tim's in the Middle**. This app uses geolocation to find a midpoint between multiple locations which it then uses to locate the nearest Tim Horton's. It's ideal for arranging group meetings, setting up Kijiji meet-ups, and all the other miscellaneous activities which require a non-formal meeting place.

Hack Harvard Hackathon (Solution Featured in Microsoft Mentor Blog) Fall 2016

- Helped create a Microsoft HoloLens shopping application named **ShopLens**. This application enables users to shop through an augmented reality environment. It uses voice recognition and cognitive services to recognize a product then uses Walmart's API to pull information and pricing while showing products to users in real time. Azure services connectivity solution featured on Microsoft Mentor's Blog.

NASA SpaceApps Hackathon (1st Place Winner) Summer 2016

- Led project to design and program a virtual reality environment named **SerenityVR**. It was created to take the astronaut away from the confined spaces that they're faced with every day as part of space travel. Spaceflight is known to create both physical and psychological damages to the body. With **SerenityVR**, we are aiming to reduce these damages through Earth-like sensory & physical activities.

Unibo Self-Balancing Vehicle Summer 2015

- **Invented and led project** in the design and build of a one wheeled self-balancing vehicle for Capstone. This project utilized **control theory** in the design of lateral and longitudinal balancing systems for a one wheeled board. Team consisted of 6 members from different faculties to accomplish this task.

Energy Control & Power Lockout (ECPL) Project Fall 2014

- Led Project that included the designing of ECPL Placards for machinery in **Essex Engine Ford** plant. Different machines in the crankshaft lines were analyzed for hazardous energy sources; informative placards about these sources were then made for the purpose of lockout devices and personnel safety.

Windsor Engineering Competition (1st Place Winner) Fall 2011-2014

- Led team in the construction of a shock absorption device used for model vehicle impact. The testing of the device had to withstand considerable force and protect any materials located in model vehicle.

F.I.R.S.T Robotics Competition Winter 2010

- In this project, several components such as gears, motors, servos and several other devices were used to build a **remote controlled robot**. This robot was programmed to **compete in a country wide competition** involving different obstacles. A **plaque was received** for extraordinary work.

Visit website for additional projects. www.moaaze.com

AWARDS

- PC Hacks (University of Toronto Hackathon) - First Place Winner
- NASA SpaceApps Challenge - Global Nominee
- ENACTUS Canada Community Service Leadership Award
- Windsor Engineering Competition (WEC) - First Place
- Ontario Power Generation University Engineering Award
- F.I.R.S.T Robotics Outstanding Contribution Award
- National History Day State Competition - First Place
- President's List for Outstanding Academic Achievements
- Board Of Education Diploma Seal For Excellence In Civics Education
- The Center for Holocaust, Genocide, and Human Rights Studies Award
- Advanced Studies Diploma With Governor's Seal
- Graduate of Honor & Distinction along with Board Of Education Seal