Nicole Rosario

Mechatronics Engineering – University of Waterloo

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SKILLS

Languages

- C++/C
- Python
- Java
- JavaScript
- HTML/CSS
- SQL
- XML

Tools

- Git/GitHub
- Agile (Jira)
- Android Studio
- XCode
- Unity
- Squish
- PLC
- Visual Studio
- SolidWorks
- AutoCAD
- MATLAB
- 3D Printer (resin and filament)
- Laser Cutter /Engraver

Mechanical

- GD&T
- Technical Drawings
- Machining
- Soldering

- Passion for learning new skills and developing solutions
- Strengths: self-learning, time management, organization, communication, problem solving

EDUCATION

University of Waterloo,
Mechatronics Engineering (Co-op)

Candidate for Bachelor of Applied Science

- Received President's Award of Distinction (university admission average above 95%)
- 80%+ average first year
- Classes: Data Structures and Algorithms, Microprocessors and Digital Logic
- Option: Biomechanics

ACTIVITIES & INTERESTS

- Advanced/New Technologies (Autonomous vehicles, Hyperloop, AI, clean energy vehicles, Robotics)
- App/Web Development
- Rocket Design/Space Exploration
- Women in Engineering Outreach Team
- Engineering Orientation Leader
- Sports: Hockey (playing and reffing), Ultimate Frisbee, Golf, Soccer

ENGINEERING EXPERIENCE

Ford Motor Company Canada, Waterloo (Co-op) **May – Aug. 2017**

(Skills: Python, Git/GitHub, Agile (Jira), Squish, SQL)

Software Integration Automation Test Engineer

- Developed automated test cases for the new version of Ford SYNC3 (Infotainment system)
- Collaborated with co-workers on development approach and on which software to use for the testing

SpaceX Hyperloop Comp. (Waterloop Design Team) **Sept. 2016 – Present**

(Skills: Arduino, SolidWorks, Machining, Soldering)

Electromagnetic Sub-team – EC Brakes & Magnetic Wheels (Goose I & II pods)

- Developed, tested, and executed code to test small/full scale hallbach wheels
- Liaised with Software team to develop and test code for the Hallbach wheels
- Designed and manufactured parts for the eddy current braking system and hallbach wheels using SolidWorks and machine shop tools

GM/SAE Autonomous Car (WATonomous Design Team) **May – Aug. 2017**

Software Team – Object Detection

- Researched different aspects of autonomous vehicles, primarily object detection sensors such as radar and LiDAR

Robotic Claw Machine (Course Project) **Oct. - Dec. 2016**

(Skills: RobotC, AutoCAD, Laser Cutting, Machining)

Mechatronics Engineering and Digital Computation courses

- Applied engineering design by identifying constraints/criteria and prototyping
- Designed and implemented software for the robotic claw machine in RobotC
- Utilized AutoCAD, laser cutter, and machine tools for design and construction

PROJECTS/HACKATHONS

Wearhacks - Waterloo (Hackathon) **Mar. 2017**

(Skills: MYO, Unity, VR, Git/GitHub)

VR Personal Assistant Prototype

- Integrated MYO, a gesture control armband, to control movements in Unity
- Developed functions including calendar, to-do, reminders using Unity

IEEE Hardware Hackathon – University of Toronto (Hackathon) **Feb. 2017**

(Skills: Arduino)

Robotic Burglar Alarm System Prototype

- Integrated sensors and other electrical components (RFID, transceivers and receivers, ultrasonic sensor) using Arduino

Personal Portfolio Website (Side Project) **May 2017 - Present**

(Skills: HTML/CSS, JavaScript, Google Developer Tools, Git/GitHub)

- Developed skills in HTML/CSS and JavaScript using Udemy and Google Developer Tools to create the website

Drone (Side Project) **Feb. 2017 - Present**

(Skills: Arduino, Soldering)

- Acquired knowledge of embedded software by researching wireless remote control
- Applied electrical engineering skills to solder electrical connections (motors, electronic speed controllers, power supply board)