

# YUSRA IRFAN

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## EDUCATION

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**Bachelor of Engineering Science (Software Engineering)**, Western University **Sept 2017 - April 2021**

- Dean's Honors List in 2018 and 2019

## SKILLS

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**Languages**    **Proficient:** Java and C++ | **Competent:** Haskell, Golang, HTML/CSS, Python, C#, Arduino, Swift, and JavaScript | **Familiar:** C, Elm, LaTeX, MATLAB, React, JavaDB, and SQL

**Tools**        Bootstrap, Git, SVN, SceneBuilder, Unit Testing, UML Diagrams, OnShape, & Terminal

**Systems**      Windows, Mac OS, Linux (Ubuntu)

## WORK EXPERIENCE

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**Software Developer (Co-op)**, IBM and McMaster University **May 2019 - Aug 2019**

- Researched Code Generation for Cryptographic Kernels (Elliptic Curve), wrote algorithms in Haskell, and helped prepare these aspects of the Coconut tool for publication as an open-source project.
- Parallelized the scalar multiplication operation of ECC using Golang; *increased the efficiency by 40%*.

**Research Assistant (Co-op)**, IBM And McMaster University **July 2018 - Aug 2018**

- Proved the feasibility of a proposal to double the number of basic math functions that a computer can calculate per second for the IBM Power 9 processor.
- Programmed the instructions using C and Haskell;
- *Published an award-winning paper* and a poster to CASCON 2018 (<https://bit.ly/2Zo14Bk>).

## PROJECTS

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**FastDr. (AmpHacks)**, *HTML/CSS, Bootstrap, JavaScript, Python, Flask, Google APIs* **September 2019**

- Developed a responsive website and an algorithm to find the fastest time to be assessed by a doctor.
- *Won The Most Creative Hack* at AmpHacks 2019

**Personal Website**, *HTML/CSS, Bootstrap, JavaScript, GitHub* **September 2019**

**YAP Shooter (SHUMP)**, *Unity, Visual Studio, C#, GitHub* **Jan 2019 - April 2019**

- Created scripts in C# to handle movement, player, enemies, spawn manager, power-ups, etc.
- Applied tags, layers, physics, collision detection to trigger events and handle game flow.
- Implemented a main menu and sound effects using SFX to enhance gaming experience.
- Collaborated with 2 classmates in an Agile environment.

**Drive Alert (SheHacks)**, *XCode, Swift, GitHub, ARKit, SceneKit* **March 2019**

- Programmed a mobile application (iOS) that tracks the driver's eyes while driving and gives an alert if they are closed for more than 3 seconds.
- Learned iOS development and demonstrated valuable skills in teamwork, leadership, and time management to complete the project in 12 hours.
- *Won Best Over-All Hack*; [devpost.com/software/drivealert-80wnxk](https://devpost.com/software/drivealert-80wnxk)

**iTravel**, *IntelliJ, Scene builder, Java, Java DB, SQL, UML Diagrams* **Sept 2018 - Dec 2018**

- Developed a software for a travel agency to manage airlines, flights, customers, and employees.

## EXTRA-CURRICULAR

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**Software Team Member**, Sunstang (Solar car Club) **September 2019 – Present**

**Co-President**, Western Karate Club **May 2019 – Present**