

# SHEIKH ABRAR TAHMID

Candidate for Bachelor of Computer Science - University of Waterloo, Class of 2023

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## SKILLS

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Languages	Java, JavaScript, HTML, CSS, C/C++, Python
Tools	Eclipse, Android SDK, JavaFX, Swing, Node.js, Electron, Git

## EXPERIENCE

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### Programmer and Team Captain

Sep 2014 - June 2018

FIRST Robotics Competition Team 5036, Toronto, ON

- Managed 20-person team to create an industrial-sized robot each year (video of 2018 robot: <http://bit.ly/2Erz5qW>)
- Programmed robots using Java and the WPILib API, implementing object-oriented programming and advanced control concepts
- Oversaw all aspects of team, including design, software and fundraising, during last 2 years with team

### Robotics Instructor

July 2018 - Aug 2018

Bot Camp, Toronto, ON

- Mentored students on how to design, build and program robots using the VEX IQ platform
- Introduced programming concepts including loops and conditional statements as well as various real-world robotics mechanisms

### Software Developer and Robot Designer

July 2017 - Aug 2017

SMARTWheel Canada, Burlington, ON

- Designed and constructed a human-sized robot mascot for a hoverboard retailer
- Programmed Java app deployed on Windows tablet to act as robot's face using Swing, FreeTTS and socket libraries
- Programmed Android app to remotely send commands to robot over Bluetooth, making it talk and change its expression

## PROJECTS

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### Laptop Guard Java, JavaFX, JavaMail, C, WinAPI

<http://bit.ly/2EFnLcr>

A Java desktop app that sounds an alarm when a user's laptop is unplugged and sends a notification to the user's email

### Quantitative Data Analysis App Java, Swing

<http://bit.ly/2T9C15P>

A Java desktop app used to make recording and analyzing robot performances at competitions easier

### Word Matching Game Java, Android SDK

<http://bit.ly/2NEoD3U>

A brain-training game with over 250 downloads where players must match word pairs hidden in an array

### 3D Platformer Game Java, jMonkeyEngine

<http://bit.ly/2VvQQfQ>

A PC game where the user controls the character, Boxie, to collect coins and jump from platform to platform

### Pong Desktop App JavaScript, Node.js, Electron

<http://bit.ly/2HaTCDk>

An implementation of Pong using Node.js and Electron where the player competes against an AI controlled opponent

## AWARDS AND ACHIEVEMENTS

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### Innovation in Control Award March 2018

FIRST Robotics Canada

Earned robotics team award by programming software for robot to perform autonomous tasks using PID loops and multiple sensors

### Qualified for FIRST Robotics World Championships April 2017, April 2018

FIRST Robotics Canada

Captained robotics team to secure 2 consecutive World Championship berths

### Principal's Award for Student Leadership June 2018

Sir Wilfrid Laurier C.I.

Recognized for demonstrating strong leadership ability on school's robotics team