

Sheikh Tahmid

Cell: 647-996-9086 | Email: sheikh.abrar.tahmid@uwaterloo.ca | [GitHub](#) | [LinkedIn](#) | Website: sheikhtahmid.me

Skills

- Programming Languages: Java, JavaScript, HTML, CSS, C, C++, Python
- Tools and Frameworks: Android SDK, JavaFX, Swing, Node.js, Electron, Git, ROS (Robot Operating System)

Experience

Member and Captain of FIRST Robotics Competition Team 5036: The RoboDevils **2014 - 2018**

- Worked with high school team to create an industrial-sized robot each year, designed to play a unique real-time strategy-based game for the FIRST Robotics Competition
- Led team to progress from ranking 44/48 at a local competition in 2014 to becoming one of the highest ranked teams in Ontario and qualify for the World Championships in both 2017 and 2018
- Official captain in 2017 and 2018 seasons; sole programmer and lead CAD designer from 2016 to 2018
- Programmed robots using Java and the API provided by the competition
- Earned the team the Innovation in Control Award in 2018 for software that implemented multiple PID loops and used various sensors, such as encoders and a potentiometer, to perform accurately during the autonomous phase of competition and assist human drivers by automating certain functions during the teleoperated phase
- Received the Principal's Award for Student Leadership at high school graduation for work with robotics team

Robotics Instructor at Bot Camp **July 2018**

- Taught students how to design, build and program robots using the VEX IQ platform
- Introduced basic programming concepts and various real-world robotics mechanisms
- Mentored assigned students and ensured they were all learning, having fun and making progress on their robots

Created "Wheely" Promotional Robot for SmartWheel Canada **July – August 2017**

- Designed and constructed a robot mascot with various materials for a hoverboard retailer
- Programmed a Java app deployed on a Windows tablet to act as the robot's "face"
- Programmed an Android app to remotely control the "face", making the robot "talk" and change its expression

Robotics Instructor at Toronto District School Board **July 2017**

- Taught summer school students how to program robots with block-based programming
- Collaborated with student-instructors and teachers to design lesson plans for each class
- Introduced basic programming concepts and connected lessons to other STEM classes

Projects

Laptop Guard (Java, C, JavaFX, JavaMail, WinAPI) **January 2019**

- Created a desktop app to protect against potential laptop thefts
- App locks out the laptop when enabled, sounding an alarm and sending an email notification to the user if the machine is unplugged; alarm stops only when user logs back in and disables app
- Created GUI using JavaFX and implemented the email notification feature using JavaMail
- Implemented Windows system function calls using C and the WinAPI

Quantitative Data Analysis App - "Scouting App" (Java, Swing) **December 2017**

- Created desktop app to improve robotics team's ability to scout and analyze other robots at robotics competitions
- User records a robots' stats after each match, allowing app to calculate averages and standard deviations for a robot's performance over multiple matches, and then rank each robot
- Created GUI using Swing, allowing saved data and robot rankings to be viewed in the app

Word Matching Game (Java, Android SDK) **May 2016**

- Created an Android brain-training app where user matches pairs of words hidden inside a grid
- Word pairs and grid placements are selected at random and difficulty increases at each level
- Over 245 downloads on third-party app store

Pong Desktop App (JavaScript, HTML, CSS, Node.js, Electron) **August 2018**

- User plays a game of Pong by controlling their paddle against a computer-controlled opponent
- Implemented the game's physics and adaptive behaviour for the computer-controlled opponent

Education

University of Waterloo **2018 – present**

- Bachelor of Computer Science, Class of 2023