Sheikh Tahmid

Bachelor of Computer Science Candidate – University of Waterloo

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Skills and Abilities

- Programming Languages: Java, JavaScript, HTML, CSS, C, C++, Python, Ruby, Racket
- Tools and Frameworks: Android SDK, NodeJS, Electron, Git, OpenCV, JavaFX, Swing, ROS
- Computer-Aided Design using Autodesk Inventor

Activities

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

- Led team to progress from ranking 44/48 at a local competition in 2014 (before involvement) to making 2 back-to-back World Championship appearances in 2017 and 2018
- Official captain for last 2 seasons; sole programmer and lead CAD designer for last 3 seasons
- Designed robots with Autodesk Inventor and programmed them in Java
- Earned the team the Innovation in Control Award in 2018 for software that contained implementations of PID loops and used various sensors such as encoders and a potentiometer
- Received the Principal's Award at high school graduation ceremony for work with robotics team

Select Projects

Laptop Guard ***2018***

- Created a desktop app to protect against potential laptop thefts using Java, C and JavaFX
- 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
- Alarm selection and email can be updated in the app's settings

Pong Game Made With Electron ***2018***

- Self-taught NodeJS and Electron by implementing a game of Pong
- User controls their paddle against a computer-controlled opponent

Quantitative Data Analysis App - "Scouting App" ***2017***

- Created a desktop app using Java and the Swing library to scout robots at robotics competitions
- User records data of robots' stats after each match, allowing app to calculate averages, standard deviations and ranges and then rank each robot from best to worst in each metric
- All data, calculated and raw, is saved on the computer and can be viewed in the app at any time

Boxie Vs the World ***2016***

- Created a 3D game with Java using jMonkeyEngine
- User controls a robot to collect coins to advance and "cheese" to earn the ability to jump
- Created the character and game models with Autodesk Inventor and Blender

Word Matching Game ***2016***

- Created an Android brain-training app where user matches randomly generated pairs of words hidden in a randomly generated grid at increasing difficulty levels

Work Experience

Robotics Instructor at Bot Camp ***July 2018***

- Taught students aged 10-14 how to design, build and program robots using the VEX IQ platform

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" and programmed Android app to discreetly control "face", making robot "talk" and vary its expression

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

- Taught summer school students in grades 1-5 how to code robots with block-based programming