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