

Riya Nandakumar

DGMD S-14

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Progress Report 2

Part 1 (3 points) Please spend 5-10 minutes expounding on the following:

1. What did you accomplish in the last week?
 - a. This week I accomplished the data collection and data examination stages of this project. I recorded 80 of my own swings, with it being split into the 4 classification groups (good swing, little pivot, wild pivot, and picking up the back leg), and further into right-handed and left-handed swings. I anticipate that the accuracy for left-handed swings may be worse than for right-handed swings, as though I can switch-hit (hit both sides), I am a much better right-handed batter. This set of 80 swings will be split into 60 (75%) swings for the training set, and 20 (25%) swings for the test set. Data examination came in the form of the SensorLog iPhone app, as I have decided to switch over to an iPhone as the sensor. This is partly due to complications between my laptop and the SensorTile, and partly for ease of model deployment. This means I have also transitioned into using Apple's Create ML to train and test my activity classification model; I have access to this through <https://www.macincloud.com/>, which provides me with remote access to a macOS Catalina 10.15.6 system. Backtracking, the SensorLog iPhone app allows me to record data from the accelerometer and gyroscope easily on my own, with my phone simply strapped to my back leg's lower calf. It also visualizes this data in real time, allowing me to screen-record my phone and examine patterns in the data for different swings.
2. What roadblocks/issues did you face?
 - a. I faced plenty of issues this week, as my laptop continues to bring me new issues every day relating to this project. Firstly, I had to abandon the SensorTile for this project, as I had downloaded a set of drivers to fix an issue my laptop's mouse was having, and then messed up the connection between my laptop and the

SensorTile. I tried redownloaded all programs, yet it still would not properly connect. For future Tutorials, I plan on using my father's spare Lenovo laptop. After this, I developed my current plan revolving around the SensorLog iPhone app; however, I do not own a laptop which runs macOS. I first tried downloading an old version of iTunes to obtain the App Store, and then XCode for my needed Create ML; however, this did not work. I then tried to create a virtual macOS environment on my laptop; however, after many hours of downloading and installing, this did not work either. Lastly, I tried using my sister's old Macbook from 2014; however, this was on its last legs, and did not have the capability to run what I desired. From here, I and my family decided that in the interest of time, I would try the <https://www.macincloud.com/> system. It is currently working as planned, yet I am facing slight issues relating to the graphical capabilities.

3. What do you hope to accomplish in the coming week?
 - a. This coming week, I hope to finish training and testing my model using Apple's Create ML. From here, I will complete the needed report, presentation, and video. Additionally, I will finish compiling a repository of all resources and files I utilized. One specific component to this plan that I need to accomplish after the model is finished is deploying the model to the SensorLog app, and from there filming a real-time swing classification.

Part 2 (2 points)

1. Estimate the current cumulative percentage of progress for your project.
 - a. My project is: 30 % completed

Part 3. (5 points)

1. Submit a presentation that summarizes your progress this past week. You will present this during class next week.
 - a. <https://docs.google.com/presentation/d/1kgOTZgHv7GVNHLDST9OBiCKs8XM7qodCcXt3cjUhuw8/edit?usp=sharing>

