Sprint 2 Report

Heading: Robot Ear, Robot Ear 11//7/2023

Actions to stop doing:
- Going overtime during stand up meetings
- Miscalculating meeting demands

Actions to start doing:
- Explicit, documented testing
- Documentation
- Create new when2meet
- Start a conversation of switching roles within the project

Actions to keep doing:
- 15 minute zoom meeting scrum check in
- At least 1 hour long meeting per week
- Keep meeting with blended team members to get bugs fixed
- Meet with TA every Monday
- Keep the standups with only updates, and changing the jira board
- Hold one hour-long in-person scrum meeting every week (Monday 9:30-10:30am) and two 15-minute meetings Wednesday and Friday because with three short meetings a week.

Work completed
- **Front end (Melany and Tanya):** As a user, I want to be able to click on a button to upload a file of music in order to eventually get sheet music back.
- **Flask backend is set up (Melany, Tanya, Rishita):** Stack is properly set up
- **Sending the file from back end to server:** endpoint is set-up and error is fixable
- **PDFer (Rishita and Lily):** A large amount of **research** was conducted for the PDFer during this sprint. Progress has been made in terms of a plan of approach but the libraries are difficult to work with.
- **Classifier:** This sprint for the classifier, a large amount of **research** was conducted. The Classifier team found a very helpful resource that helps us build the machine learning model and helps us turn the NSynth data into spectrograms. We feel confident that we can get our model to work with this helpful resource but we are stuck on gathering the training data and having enough disk space. We are currently working on figuring out how to take a much smaller portion of the training data (instead of 71GB) and training our model with that, then testing it. https://colab.research.google.com/github/timsainb/tensorflow2-generative-models/blob/master/8.0-NSYNTH-iterator.ipynb
- **Overall work completed:** progress on all our user stories, but some spikes have set us back.

Not completed

- Machine learning spectrogram based classifier with all training data used to train not complete. This will probably become a user story for the next sprint because right now we don't have the resources to support the amount of disk space needed to train with all the nsynth data. We know that by using more data, we can create a more accurate classifier. This is an ongoing user story.
- PDFer implementation.

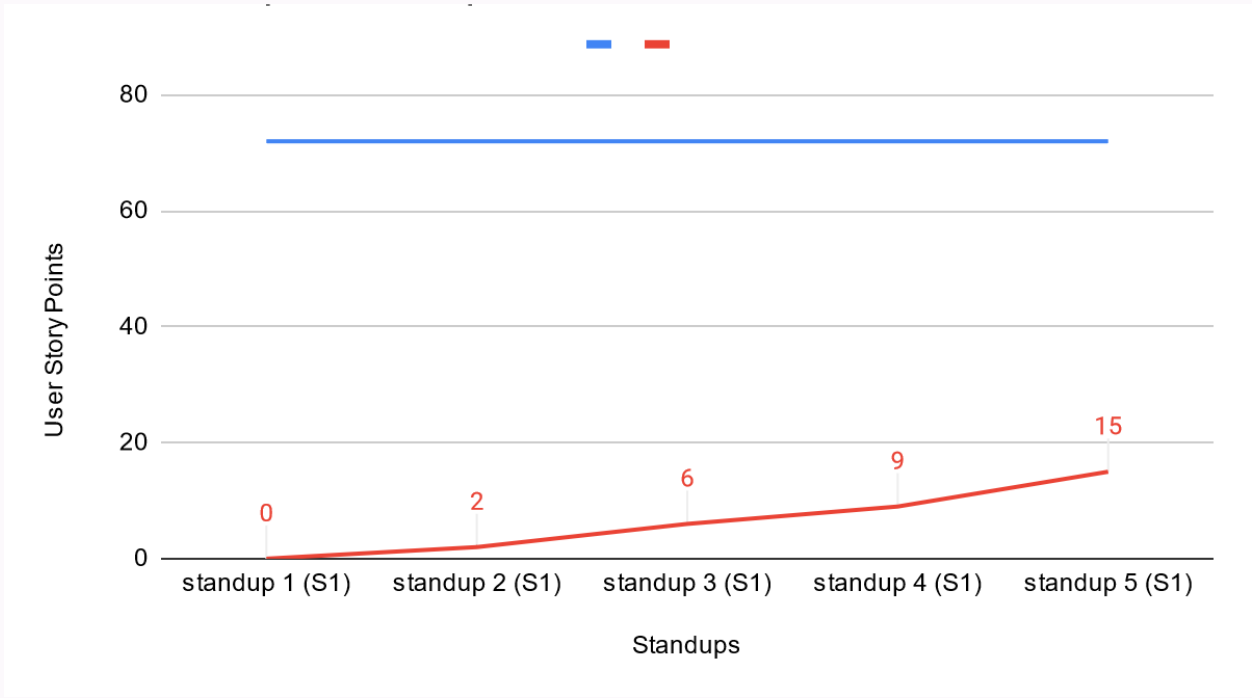
Spikes:

- PDFer technology is new (requires more research) version control and downloading libraries (limited documentation)
- Working with large amount of training data for model
- Sending file to back end bug (404 error)

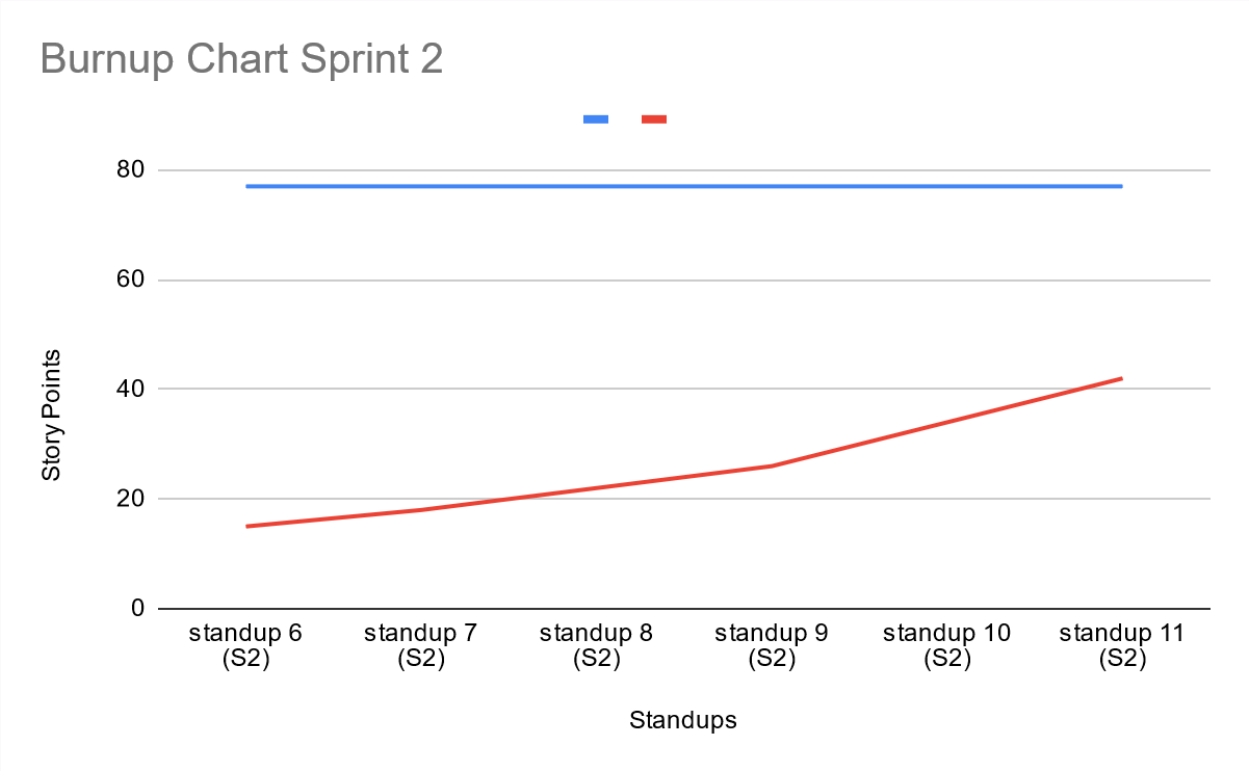
Work completion rate:

- Total number of user stories completed during the sprint: 6
- Total number estimated ideal work hours completed during prior sprint: 28
- Total number of days during the prior sprint: 13
- Sprint 1 average user stories/day: 5/13
- Sprint 1 ideal average user stories/day: 5/13
- Sprint 2 average user stories/day: 6/14
- Sprint 2 ideal average user stories/day: 7/14

Sprint 1 Burnup Chart:



Sprint 2 Burnup Chart:



Burnup chart of Sprint 1 and Sprint 2 combined: