

MouthPiece

COS301 Team Gamma: Neural Network Team Goals

March 2020

1 Introduction

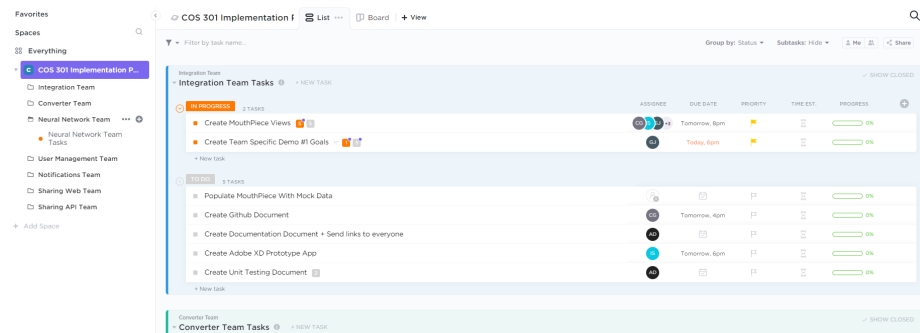
This document describes the responsibilities and all deliverables for the Neural Network Team.

Demo #1 Due Date: Thursday 12 March 20:00

2 Organisation

2.1 ClickUP

You need to elect a team leader if you have not done so already. Work together with this member to create tasks and sub-tasks for each member in your team on <http://clickup.com> (on the COS301 workspace you have been invited to).



Ensure that you indicate progress and mark tasks as complete. This page will be displayed at the demo.

2.2 Slack

Although we have created a WhatsApp group - we do still find it easier for in-group discussions to happen on the slack channels. Simply login to <http://cos-301.slack.com>

3 Overall Team Tasks

These are the tasks to be done by your team for the final product (not specifically Friday’s demo).

- Deploy a server-side Neural Network
- Store a “master” “global” Neural Network model online
- Improve this model by adding new training data uploaded by the user
- Provide the Converter Team with the trained model
- Help the Converter Team to implement and query the model

The tasks are always subject to change, but we have tried our utmost best to sketch out the entire project ahead.

4 Team Tasks for Friday

4.1 Documentation

All documentation to be created in Overleaf - Overleaf link to be sent to the Integration Team

4.1.1 Implementation Plan

Create a document explaining how the neural network will function and integrate with the rest of the system.

More specifically:

- Explain your plan to train the model and which data the model will give as output
- List the technologies that you will use
- Draw basic flow diagrams on <http://draw.io> depicting which parts of the Neural Network run where (model on device, training on server) and how that interaction works

4.1.2 Frameworks

You are required to do some research on frameworks that you could implement to assist your **Overall Team Tasks**. Write a short report on only the frameworks that you are keen to implement. Show its benefits and how you can implement it with the existing technologies.

Some examples

- <https://voice.mozilla.org/>
- <https://www.tensorflow.org/>
- <https://pub.dev/packages/ai>

4.2 Development Environment

You are required to setup the development environment (have it running on at least one member's device, ready to demo). Setup everything you think you require.

At bear minimum

- Android Studio
- Visual Studio Code
- Flutter

This is required for your implementation in any case.

4.3 Hosting Environment

You will need show the environment where the Neural Network will be hosted and trained.

4.4 Implementation

Up to the team to devise a functional demo to showcase the direction they are heading.

4.4.1 Unit Testing

Describe how your team will implement unit testing. Better yet - implement it in the Demo where possible.