DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
THE UNIVERSITY OF TEXAS AT ARLINGTON

PROJECT CHARTER
CSE 4316: SENIOR DESIGN I
SUMMER 2017

TEAM C
LANGUAGE PRONOUNCIATION ASSISTING APP

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REVISION HISTORY

Revision	Date	Author(s)	Description
0.1	07.03.2017		document creation

CONTENTS

LIST OF FIGURES

Vision

Our project vision is to improve current pronounciation-training technology, by providing real-time feedback on word accuracy.

Mission

Our mission is to assist people with improving their foreign language pronounciation skills.

Success Criteria

A successful scenario for us is one where we've developed a mobile application which gives feedback to the user for their distance to a regular speaker's pronounciation of the same word.

BACKGROUND

Our team has little to no experience in designing mobile applications, and we are required to design a language recognition application that studied the Python libraries of neural networks to instantiate the correct pronunciations of words, the requirement that is stated by the sponsors that the computing logic of the application needs to be computing in the cloud either using Microsoft Azure, Amazon WPS, or Google Cloud, which then will tie into an Android application guided user interface designed using Android Studio and Java and only display the results of the logic.

RELATED WORK

Currently there are many Speech and Text Recognition software out in the market, both on iOS and Android platforms, however none of the software achieve what we are trying to achieve. However, we can look at these applications to provide us with a starting point in the initial design of our mobile app. We are trying to appropriate a dictation software that can recognize speech and return the proper pronunciation of the verbiage being used.

SYSTEM OVERVIEW

As stated in section 4 (Background) of this document, the requirements are to code logic using python on the cloud where the main computation of the algorithm will concur using the neural network libraries currently present in Python, whereas, after the logic has been computed, the end result, which in this case will be verbiage, with correct pronunciation and context, will be then returned to the GUI designed for Android phones which will be present on the local system (users phone). The main reason being, one cannot be aware of the computing power of an end users phone, if the computing power is less than what is required by the logic then the application itself will crash. A visual representation is below of the idea behind the system design.

ROLES & RESPONSIBILITIES

The product owner of our project is Nowreen Jilaney. She will be in charge of making sure that the team knows all of the specifications for the product and will be the lead in interacting with the sponsors. The Scrum Master is Syed Ali. He will be in charge of making sure the team members know what they are working on and keeping the team on track.

FACILITIES & EQUIPMENT

As our product is a mobile app, there is no specialized equipment that we need. We will need licenses for the environments we will be using to code the app, such as the environment for Python. We will also need access to a cloud server for computing and storage.

COST PROPOSAL

Details for the preliminary budget, as well as the current & pending support are below.

PRELIMINARY BUDGET

The preliminary budget for our project is $800.

CURRENT & PENDING SUPPORT

We have not currently spent any of our budget. Our pending spending will include monthly costs for access to the cloud computing service from Amazon Web Service, AWS.
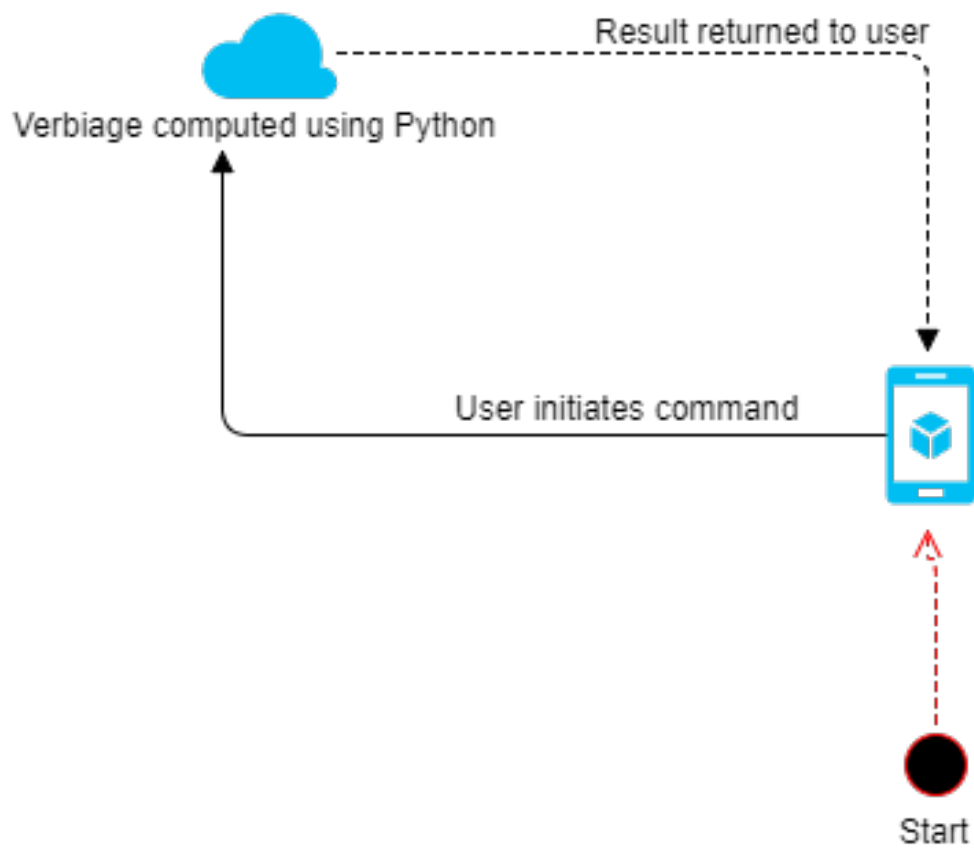
Figure 1: General System Overview

DOCUMENTATION & REPORTING

In this section, you will describe all of the various artifacts that you will generate and maintain during the project lifecycle. Describe the purpose of each item below, how the content will be generated, where it will be stored, how often it will be updated, etc.

PROJECT CHARTER

Details for the project charter are contained within this document.

PRODUCT BACKLOG

Task
Investigate Neural Network Python Packages
Create Bare-bones Android Application
Implement server-side code on AWS

SPRINT PLANNING

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SPRINT GOAL

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SPRINT BACKLOG

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TASK BREAKDOWN

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SPRINT BURNDOWN CHARTS

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SPRINT RETROSPECTIVE

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INDIVIDUAL STATUS REPORTS

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Figure 2: Example sprint burndown chart

Engineering Notebooks

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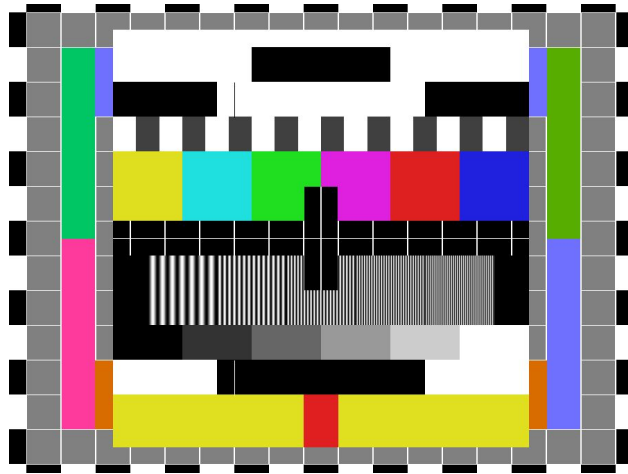
Closeout Materials

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System Prototype

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Project Poster

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Web Page

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Demo Video

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Source Code

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Source Code Documentation

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Hardware Schematics

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CAD files

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Installation Scripts

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User Manual

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