[**Classification of Stuttered Speech Behaviors of Filipinos Who Stutter Using Machine Learning Algorithms**](http://www.projectmanagementdocs.com)

Statement of Work (SOW)

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**Table of Contents**

[Introduction/Background](#_gjdgxs)

[Scope of Work](#_30j0zll)

[Period of Performance](#_1fob9te)

Place of Performance

[Work Requirements](#_2et92p0)

[Schedule/Milestones](#_tyjcwt)

[Acceptance Criteria](#_3dy6vkm)

[Other Requirements](#_1t3h5sf)

# **Introduction/Background**

The researchers of the study has conducted the study as an effort to reduce subjectivity of the diagnoses of stuttered speech. The members in the research team are expected to obtain related literature and researches that will back up the research. Experiments will be conducted by the researchers to train the classifier models, and test the accuracy of the resulting classifiers. The complete methodology as well as the results will be comprehensively documented by the researchers. At the end of the research, an academic paper containing the results of the experiments will be produced, containing information regarding the performance of each machine learning classifier used. Moreover, the most effective classifier algorithm/s will be determined.

# **Scope of Work**

The scope of work for the project contains all planning, initial research, data gathering, experimentation, and results analysis involved in this research. Specific deliverables will be listed in the Work Requirements and Schedules and Milestones sections of this SOW.

# **Period of Performance**

The period of performance for this research is approximately one and one-fourth of a year beginning on the month of January, 2016 to the month of August, 2017. All the findings done by the researchers up until the end of the timeframe will be manifested in the paper.

# **Place of Performance**

The researchers of the study will perform majority of the work in their own homes. The team will meet for at least four days in a week during class.

# **Work Requirements**

The following is a list of tasks which will result to the successful completion of the research study:

Kickoff:

* Researchers will brainstorm on possible research topics.
* Researchers will agree upon a research topic.

Research Problem Analysis

* Researchers will study the problem at hand
* Researchers will investigate the background of the problem
* Researchers will set objectives
* Researchers will set a specific scope and limitations

Preliminary Research

* Researchers will find and analyze related literature and researches

Data Gathering

* Researchers will gather data that will be used for experimentation
* Researchers will extract audio features from segmented stuttered speech instances
* Researchers will preprocess the data

Training of the Classifier Models

* The training dataset will be fed to the different classifier models

Testing of the Classifier Models

* The testing dataset will be classified by each of the classifier models
* The accuracy of each classifier will be recorded
* The classifiers will be compared with each other

Documentation

* All essential data such as the methodology used and significant results will be documented in the academic paper

# **Schedule/Milestones**

The below list consists of the intended initial milestones identified for the study:

Research Topic Selection February, 2016

Research Problem Analysis March, 2016

Research Design Planning June, 2016

Preliminary Research of Related Studies July, 2016

Data Gathering for Experimentation August, 2016

Data Features Extraction September, 2016

Data Preprocessing October, 2016

Training and Testing of Classifiers December, 2016

Results Analysis and Major Documentation December, 2016

Intended milestones may change over time.

# **Acceptance Criteria**

The major deliverables will be judged by a panel in order to determine how much the research has progressed. This will be done each term. At the final stage, a final oral defense will be held in the purpose of validating the research study made.

# **Other Requirements**

Every week, the researchers of the study are required to produce status reports containing essential information regarding the state of the research. These status reports are to be received by the project adviser and concerned professors to monitor the researchers’ progress.

**Acceptance**

Approved by: Juan Diego Huet

Project Manager

Date:

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