PSPD

Alexio Peiris

W1761873 - 2018110

INTRODUCTION

- Stuttering
- Identification of stuttering
- Correction of stuttering
- Explanation of the proposed system
- Novelty of the research
- Explanation of the implementation

STUTTERING

- Stuttering is a speech disorder that affects the fluency of speech.
- It is characterized by interruptions in the flow of speech, including repetitions, prolongations, and blocks.
- Can also involve physical behaviours such as tension or movements of the face or body.
- Can occur in both children and adults
- Can have a significant impact on social, educational, and professional activities.
- Stuttering can be caused by a combination of genetic, neurological, and environmental factors but the causes are not fully understood.
- Speech therapy, self-help techniques, and the use of assistive technology are the existing treatments at the moment.

IDENTIFICATION OF STUTTERING

- Has been attempted multiple times and in multiple ways
- Mainly aims to identify the core stuttering behaviours
- TDNN's identified to be suitable for capturing contextual aspects of the dysfluent utterances(Sheikh, 2021)

CORRECTION OF STUTTERING

- No established ways to correct stuttering
- Alternative, easy and fast solution
- Established system which come closer to stuttering correcction:

- Descript

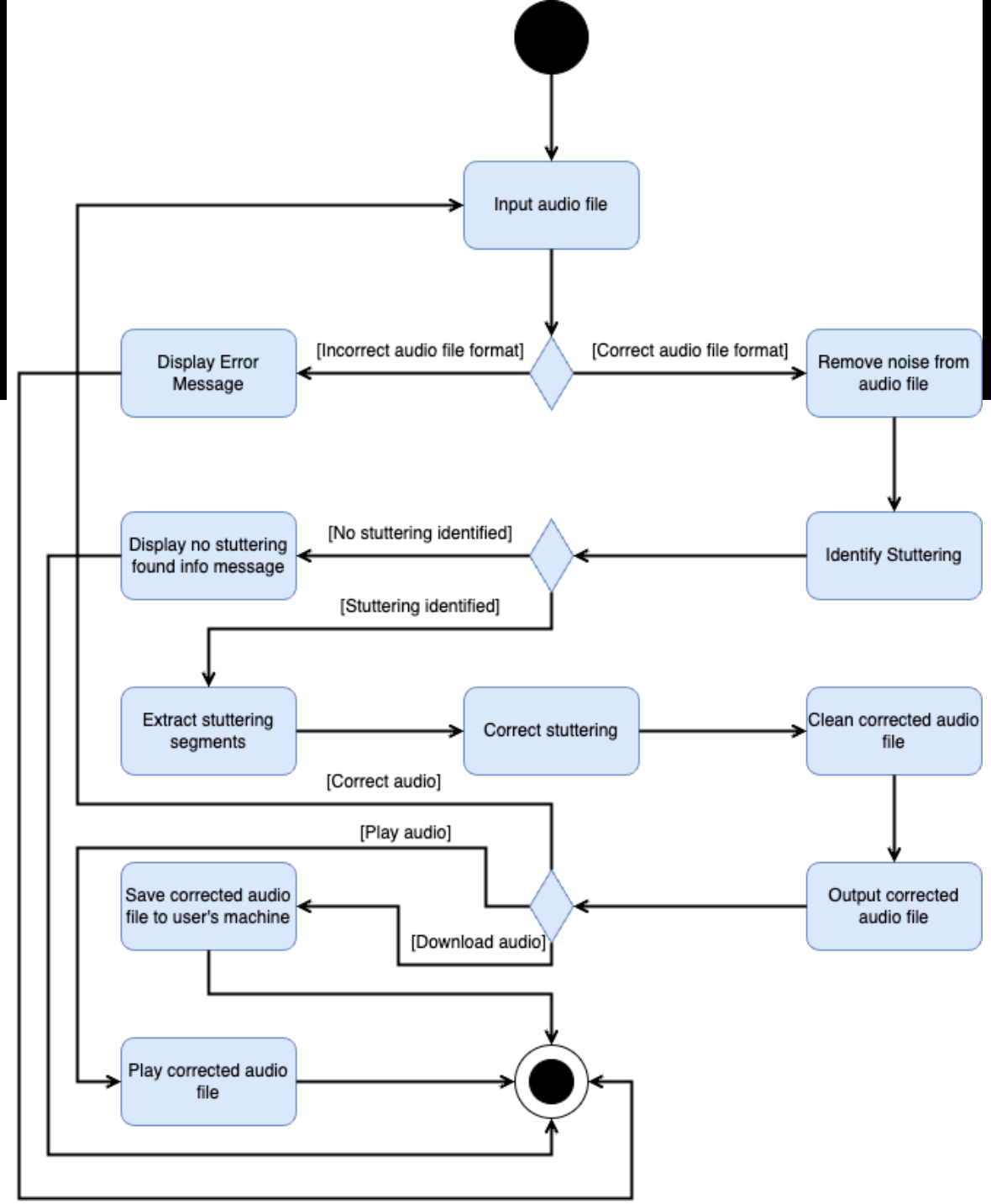
NOVELTY OF THE RESEARCH

- Problem novelty – Identify correctly the stuttering core behaviours by increasing achieved accuracies
- Solution novelty – Correcting the stuttering instances in an audio file as at the moment there are no established solutions

PROPOSED SYSTEM

- The prosed system would have 4 major stages:

1. Input audio file
2. Identify stuttering in audio file
3. Correct stuttering in audio file
4. Output stuttering in audio file


Input audio file
Display Error Message
[Incorrect audio file format]
[Correct audio file format]
Remove noise from audio file
Display no stuttering found info message
[No stuttering identified]
Identify Stuttering
[Stuttering identified]
Extract stuttering segments
Correct stuttering
Clean corrected audio file
[Correct audio]
[Play audio]
Save corrected audio file to user's machine
[Download audio]
Output corrected audio file
Play corrected audio file

IMPLEMENTATION

- Explanation of the implementation done upto now
- https://github.com/AlexPeiris7/Dysfluency-detection-and-correction

CONCLUSION

- System will be a contribution in the stuttering domain.
- System will aim to have the highest accuracies possible when detecting the core stuttering behaviours.