Nepali Audio Signal Synthesizer
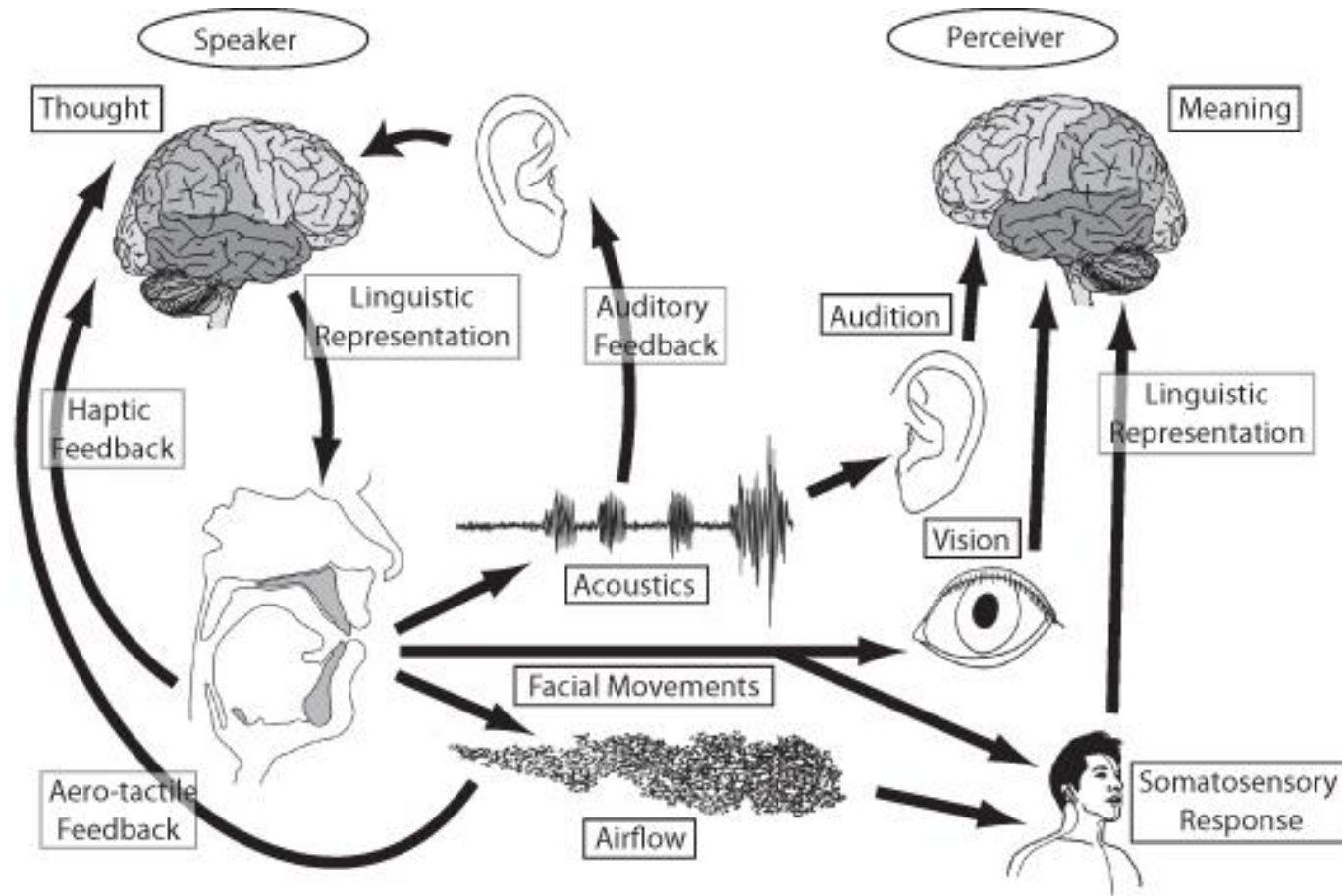
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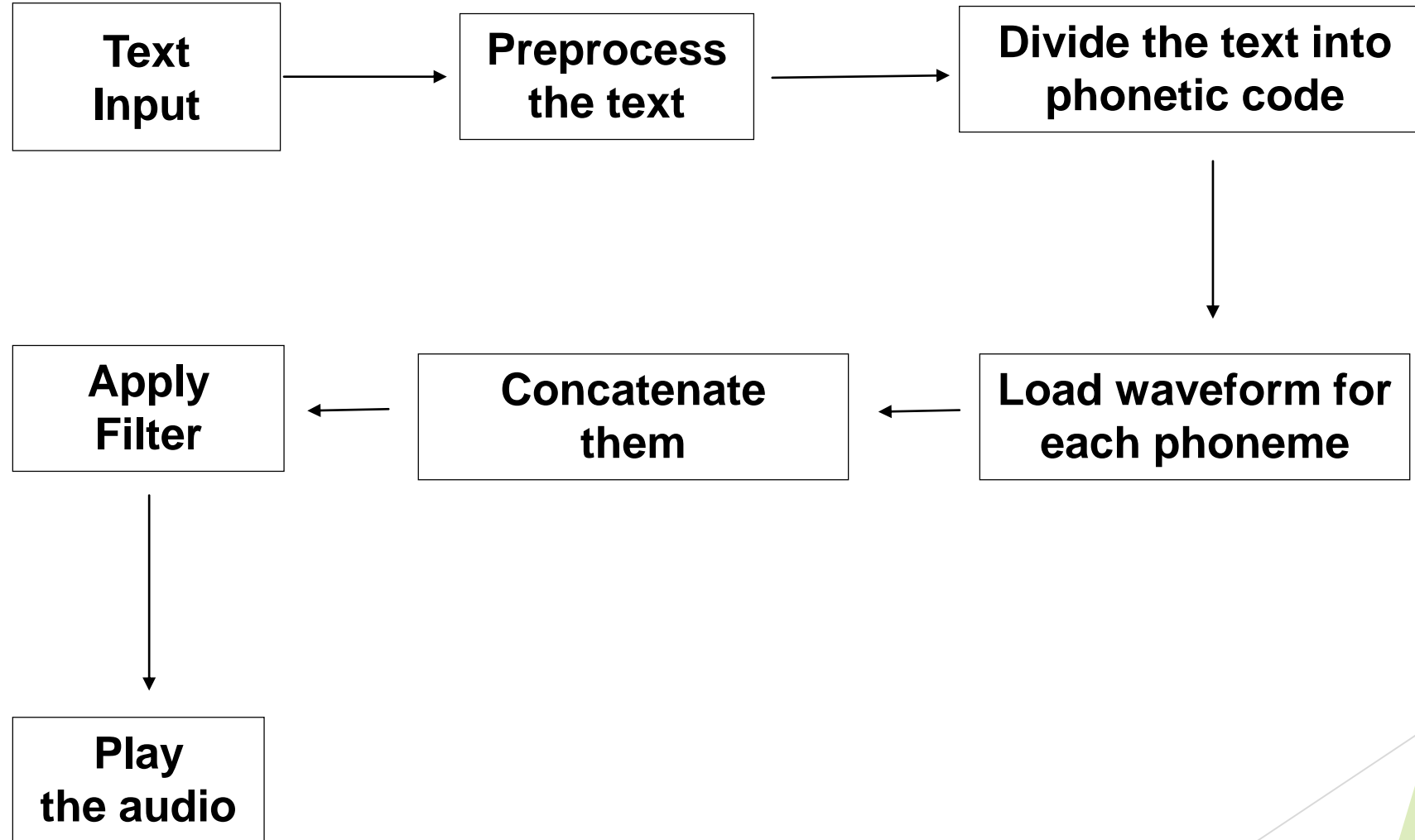# Audio Signal has always been a part of interest.

What is our project?

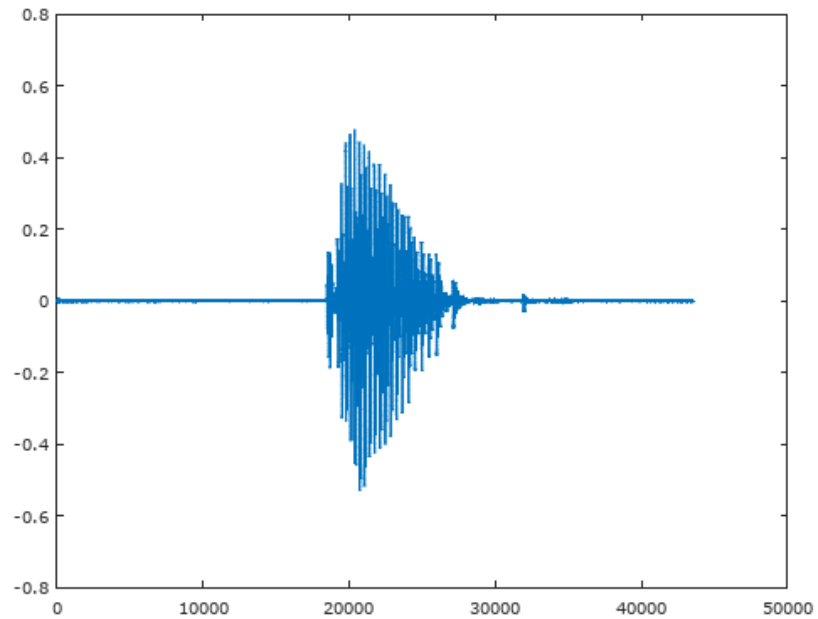It is a concatenative model based Nepali text to speech system.

| Text Input | → | Conversion Model | → | Audio Output |

How it is all done?

```
┌──────────────┐      ┌──────────────┐      ┌────────────────────┐
│     Text     │ ───► │  Preprocess  │ ───► │  Divide the text   │
│    Input     │      │   the text   │      │  into              │
│              │      │              │      │  phonetic code     │
└──────────────┘      └──────────────┘      └────────────────────┘
                                                      │
                                                      ▼
┌──────────────┐      ┌──────────────┐      ┌────────────────────┐
│    Apply     │ ◄─── │ Concatenate  │ ◄─── │ Load waveform for  │
│    Filter    │      │     them     │      │   each phoneme     │
└──────────────┘      └──────────────┘      └────────────────────┘
       │
       ▼
┌──────────────┐
│     Play     │
│  the audio   │
└──────────────┘
```
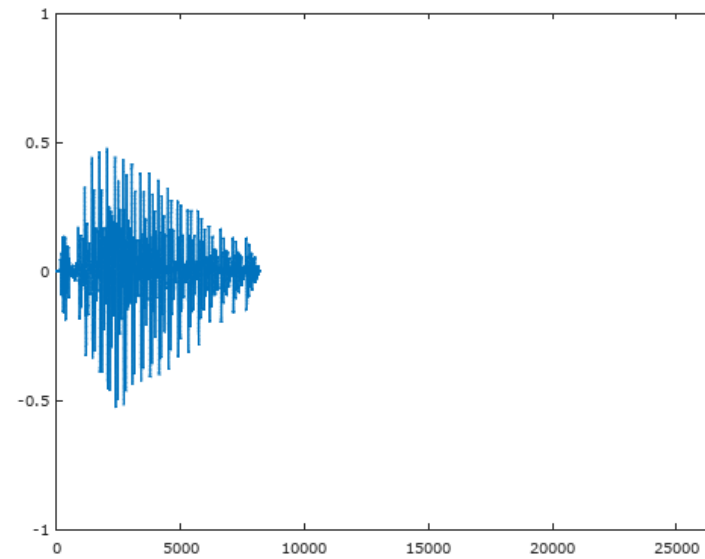
We started with Data collection.

Data Collection

At Raw state

After Preprocessing

Behind the scene, what happens is:

पुल्चोक $ *

पुल्चोक

पुल्चोक = पु + ल् + चो + क

User interface

Input Text: पुल्चोक क्याम्पसमा तपाइँलाई स्वागत छ । | Play

SWOT ANALYSIS

S

-**Can handle many unexpected situation**

W

-**Non-humanly sound**

O

•**Possibility of further enhancement**

T

-**Outdated Model**

Applications

- It can be used as assistance technology for verbally impaired and illiterate people.

- It can be used for giving humanoid ability to robots.

- It can be used for making voice bots which can serve people in many field like hospitals, government offices etc.

- It may change the way we produce audiobooks, radio programs and many more.

Thank you