

# CIS598

## Plan Ver 2.0

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21/2/2020

### Develop a complete Product:

Subtitle Generator with Speech Recognition

### Problem:

1. **Little** AI / Web Develop / Speech Recognition Experience – Both of us

#### 1.1 Detail info (What we know):

AI – Python Sklearn dealing with sentiment data analysis

Web – Flask

Speech Recognition – Zero Experience

### Strategy:

1. **Mainly focus** on developing a **complete product** with Baidu API

#### 1.1 Function need to be implemented

#### **Core:**

API Interaction – Sending audio, Get result

Subtitle related – Sperate Audio into piece, time recording, output

#### **Additional:**

Language Support

Ability of processing video / various types of audio

Realtime output

Make it a web application

## Schedule

**Workable** before **late March** (Around 3/22)

3/22 – Early May: Try to build our own model (See Below)

## After that - Challenging:

Make best effort to build our **own model**

Potential Solution:

**Mozilla Deep Speech**

1. Open Source
2. With enough guide on GitHub

**Amazon LightSail**

1. For training model
2. Maybe Web App

Training:

1. Free dataset provided by TensorFlow

## Problem

1. **Zero experience** – both of us
2. Not sure we can make it or not
3. Seems that Amazon LightSail **doesn't provide GPU** support (need to

upgrade the service)

- a) Hardware problem – Only CPU, should be enough for training model

| Linux/Unix  |  | Windows   |  |
|---|--|---|--|
| <b>\$3.50</b><br>USD/mo   |  | <b>\$5</b><br>USD/mo  |  |
| <b>\$10</b><br>USD/mo   |  | <b>\$20</b><br>USD/mo   |  |
| 512 MB Memory<br>1 Core Processor<br>20 GB SSD Disk<br>1 TB Transfer* |  | 1 GB Memory<br>1 Core Processor<br>40 GB SSD Disk<br>2 TB Transfer*   |  |
| 2 GB Memory<br>1 Core Processor<br>60 GB SSD Disk<br>3 TB Transfer*   |  | 4 GB Memory<br>2 Core Processor<br>80 GB SSD Disk<br>4 TB Transfer*   |  |
| <b>\$40</b><br>USD/mo   |  | <b>\$80</b><br>USD/mo   |  |
| <b>\$160</b><br>USD/mo  |  |   |  |
| 8 GB Memory<br>2 Core Processor<br>160 GB SSD Disk<br>5 TB Transfer*  |  | 16 GB Memory<br>4 Core Processor<br>320 GB SSD Disk<br>6 TB Transfer* |  |
|   |  | 32 GB Memory<br>8 Core Processor<br>640 GB SSD Disk<br>7 TB Transfer* |  |

- b) Develop environment – Should be **Linux**

4. Any recommend material / guide?