AMG Group

ICAIL
Interational Certification
of Artificial Intelligence License

جمهورية مصر العربية
وزارة الشباب والرياضة
Ministry of Youth and Sports

RSANH
HUMAN CAPITAL DEVELOPMENT

SPEECH TO TEXT

PROJECT

The first batch of the International License for Artificial Intelligence | Team Number 4

CONTENT

Team Members

Laila Mohamed

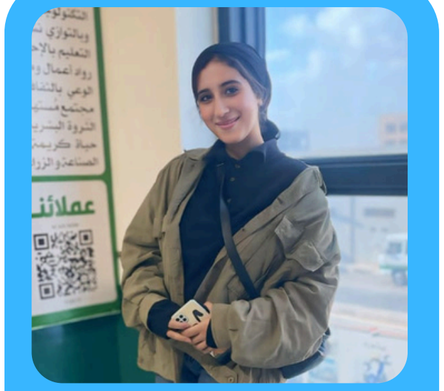
2025- icail

Marina Soliman

2025- icail

Ibrahim Abdelwahab

2025- icail



Mariam Youssef

2025 - ICAIL -

Mostafa Mahmoud

2025- icail

Introduction

- This project captures audio input, converts it to text, and summarizes the content.
- It helps users save time by quickly extracting key points from long speech.
- We chose this project because it combines practical use with core AI skills.

Objectives

- Convert spoken language into written text.
- Automatically summarize long speech into concise information.
- Provide both audio and text outputs for accessibility.
- Make a user-friendly GUI-based desktop tool.

Target Users

- Students, researchers, teachers, and professionals.
- They need to transcribe and summarize voice notes, lectures, or meetings efficiently.

Key Features

- Voice-to-text conversion (Speech Recognition).
- Text summarization using LSA (Latent Semantic Analysis).
- Audio playback of the summary (Text-to-Speech).
- File-based input (WAV files).
- User-friendly GUI with two input options.

Tools and Technologies

- Programming Language: Python
- Libraries: speech_recognition, pyttsx3, sumy, tkinter
- Platforms: Desktop (Windows/Linux)

Tools and Technologies

- Programming Language: Python
- Libraries: speech_recognition, pyttsx3, sumy, tkinter
- Platforms: Desktop (Windows/Linux)

Testing and Results

- We tested using multiple voice samples in quiet and noisy environments.
- Some issues with speech accuracy in noisy places.
- Added error handling and GUI feedback for better user experience.

Final Output / Outcome

- A fully working desktop tool with two input modes: microphone or audio file.
- Produces a summarized text file and reads the summary aloud.
- Easy-to-use and lightweight.

Conclusion and Future Work

- Successfully built a functional AI tool that combines multiple technologies.
- In future: add support for Arabic language, improve accuracy, and support longer inputs.
- Could be extended to mobile or web-based versions.

AMG Group

ICAIL
Interational Certification
of Artificial Intelligence License

جمهورية مصر العربية
وزارة الشباب والرياضة
Ministry of Youth and Sports

RSANH
HUMAN CAPITAL DEVELOPMENT

Thank You