CCSI – 598 – Advanced Topic In Computer Science

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Project Collaboration

I plan on doing this with my friend Ibaad Mohammed.

Project Overview

The web service is designed to help users automatically take notes during conversations, especially in fast-paced events like career fairs. The service listens to live conversations, converts speech to text in real time, and generates short, meaningful notes that users can access later.

Technical Implementation

The core functionality will use Google Cloud Speech-to-Text API or OpenAI Whisper API to convert audio into text accurately, even in noisy environments. Once the speech is transcribed, Natural Language Processing (NLP) models powered by OpenAI's GPT API or Hugging Face Transformers will process the conversation and summarize key points like company names, job roles, requirements, and contact information.

Platform and Tools

The service will be accessible through a mobile app and web app, with the frontend built using React, and the backend developed using Python and

Django. Audio will be recorded and streamed in real-time using WebRTC or the MediaRecorder API.

Data Storage and Authentication

User notes and audio files will be securely saved using Firebase or AWS S3, while user authentication will be managed with Firebase Auth, Auth0, or Django's built-in authentication system (TBD based on final integration choice).

Key Features

- Real-time speech-to-text

- Live audio recording

- Automatic summarization into notes

- Save and organize notes by event or company

- View and edit notes later

- User login/signup

- Sync across devices (mobile & web)

- Export notes (PDF/email)

UI Navigation & Pages

This is a draft and may evolve, but we'll stay in loop with you for updates.

- **Home Dashboard** – Shows recent notes and upcoming events.

- **Login/Signup Page** – User signs in or creates an account.

- **Record Page** – Start/stop live audio, show live transcription.

- **Notes Page** – View, search, or edit saved summaries.

- **Settings Page** – Profile, export options, logout.