

Meeting Notes Summarizer: AI-Powered Transcript Analysis

Streamlit App for Summarization, Action Items, and
Translation

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Introduction

- **Purpose:** Automate analysis of meeting transcripts to extract insights and improve productivity.
- **Context:** Streamlines meeting follow-ups by summarizing key points, action items, sentiment, and entities.
- **Technology:** Powered by Google Gemini 1.5 Flash, Streamlit, VADER, spaCy, and PyMuPDF.
- **Key Features:**
 - Processes PDF/text transcripts.
 - Generates key points, action items, sentiment analysis, and named entities.
 - Supports translation (e.g., Hindi).

Key Features

- **Input Flexibility:**

- Upload PDF or text files.
- Paste transcript directly.

- **Analysis Capabilities:**

- Summarize key points (max 5).
- Extract action items with owners/deadlines.
- Sentiment analysis (Positive/Neutral/Negative).
- Named entity recognition.

- **Translation:**

- Outputs in English and Hindi (हिंदी).
- Supports other languages (e.g., French).

- **Output:**

- Plain text summary report.
- Downloadable as .txt file.

How It Works

- ➊ **Input Transcript:** Upload PDF/text file or paste transcript.
- ➋ **Process Transcript:**
 - Extract text from PDF using PyMuPDF.
 - Analyze with Gemini 1.5 Flash for key points and action items.
 - Use VADER for sentiment analysis.
 - Use spaCy for named entity recognition.
- ➌ **Translate:** Generate Hindi (or other language) translation of summary.
- ➍ **Output:** Display key points, action items, sentiment, entities, and translated summary.
- ➎ **Download:** Save results as a text report.

- **AI Model:** Google Gemini 1.5 Flash
 - Multimodal, fast, cost-effective.
 - Used for summarization, action items, and translation.
- **Framework:** Streamlit (Python-based web app).
- **Dependencies:**
 - `streamlit`, `google-generativeai`, `pymupdf`.
 - `vaderSentiment`, `spacy` (with `en_core_web_sm` model).
- **Output:** Plain text summaries in English and Hindi.
- **Error Handling:** Robust handling for file, API, or text issues.

Input Example:

- Transcript: "Team discussed project delays. John to finalize report by Friday. Sentiment was tense."

Output Example (Hindi): मुख्य बिंदु:

- टीम ने परियोजना देरी पर चर्चा की।
 - रिपोर्ट को शीघ्र अंतिम रूप देने का निर्णय।
- कार्य आइटम:
- जॉन: शुक्रवार तक रिपोर्ट अंतिम रूप दें।
- भावना विश्लेषण: नकारात्मक (संयुक्त स्कोर: -0.34)

Output Example (English):

Key Points:

- Team discussed project delays.
- Decision to expedite report finalization.

Action Items:

- John: Finalize report by Friday.

Sentiment Analysis: Negative
(Compound Score: -0.34)

Named Entities:

- John (PERSON), Friday (DATE)

Benefits

- **Efficiency:** Automates transcript analysis, saving time for teams.
- **Comprehensive:** Extracts key points, action items, sentiment, and entities.
- **Accessibility:** Bilingual output (English, Hindi) for diverse users.
- **User-Friendly:** Simple UI with file upload, text input, and download options.
- **Flexibility:** Supports PDF/text inputs and multiple languages.
- **Cost-Effective:** Uses Gemini 1.5 Flash for fast processing.

Conclusion

- **Summary:** The Meeting Notes Summarizer app streamlines meeting follow-ups with AI-driven analysis, bilingual output, and comprehensive insights.
- **Value:** Saves time, improves clarity, and enhances productivity.