



LectureGenius

Democratizing Education Globally with AI

Powered by Gemini 3.0 Flash

Next.js 14

Live Demo

An AI-powered lecture companion that records, transcribes, summarizes, and translates lectures in real-time, syncing neatly formatted Google Docs directly to your Drive.



Live Demo



View on GitHub



Features



Live Audio Visualizer

Real-time frequency visualization with animated waveforms that respond to your voice.



Real-Time Captions

Live speech-to-text transcription shows what you're saying as you speak.



Gemini Intelligence

Multimodal audio processing with intelligent summarization and structured output.



Universal Translator

Automatic translation to 50+ languages with smart default preferences.



Google Drive Sync

All recordings and notes automatically saved to your personal Drive.



Secure Auth

Sign in with Google Account using OAuth 2.0. Your data stays in YOUR Drive.



How It Works

1

Record

Click "Start Recording" and speak naturally

2

Visualize

Watch live visualizer and real-time captions

3

Process

Gemini generates structured notes

4

Translate

Automatic translation to your language

5

Save

Everything syncs to Google Drive



Tech Stack

| Category | Technology |
|----------------|---|
| Frontend | Next.js 14, React, TypeScript, Tailwind CSS |
| AI Engine | Google Gemini 3.0 Flash (Multimodal) |
| Audio | Web Audio API, Web Speech Recognition API |
| Authentication | NextAuth.js with Google OAuth 2.0 |
| Storage | Google Drive API |
| Deployment | Vercel |



Quick Start

1. Clone the repository

```
git clone https://github.com/ramkdataeng-lab/lecture-genius.git
cd lecture-genius
```

2. Install dependencies

```
npm install
```

3. Set up environment variables

```
NEXTAUTH_URL=http://localhost:3000
NEXTAUTH_SECRET=your_random_secret
GOOGLE_CLIENT_ID=your_google_client_id
GOOGLE_CLIENT_SECRET=your_google_client_secret
GEMINI_API_KEY=your_gemini_api_key
```

4. Run the development server

```
npm run dev
```

Open <http://localhost:3000> 🎉



Use Cases



Students

Never miss a lecture detail, get notes in your native language



Educators

Create accessible content for international students



Researchers

Transcribe interviews and seminars automatically



Language Learners

Study in one language, review in another



Hackathon Submission

Built for the Gemini API Developer Competition on Devpost

[Live Demo](#)

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