



### Motivations

- Farmers in the Mekong Delta face challenges in documenting and sharing experiences.
- Manual transcription of interviews is time-consuming, error-prone, and inconsistent.
- Lack of automated tools creates barriers for scalable research, data analysis, and reporting.



### Methodology

- Android App built with Kotlin + Jetpack Compose
- Audio Recording → stored in AWS S3
- Speech-to-Text (STT) via ElevenLabs API
- AI Summarization using Gemini 1.5
- MongoDB backend for storing transcripts & metadata



### Key Features

- Role-based login (farmers / researchers)
- Secure audio uploads linked to user email
- Auto-generated summaries & insights
- In-app transcript viewing & file playback

### Results

- 100% automation from recording → transcript → summary
- Transcription accuracy boosted via AI post-processing
- **Time reduced:** 2-3 hours manual work → < 5 mins automated
- **Error rate reduced:** human transcription inconsistencies eliminated
- **Accessibility:** Farmers can contribute in native language; researchers get structured summaries instantly
- **Scalability:** Supports hundreds of interviews monthly without extra manpower

### Highlights

- Supports sustainable farming research with structured data collection
- Offline recording, later sync to cloud when online
- Summarized insights for researchers and policymakers
- Secure storage with MongoDB + AWS S3
- Role-based access ensures data integrity and fail-safe recovery

Our application is engineered with a strong emphasis on usability and interface consistency, ensuring that users can intuitively navigate core functionalities without prior exposure. The system implements clear and context-aware button mappings, designed to streamline task execution and reduce cognitive load, effectively guiding users toward their intended actions through a structured interaction flow.

## About Us

Member :

Ho Minh Duc(\$3994277),  
Pandega Abhinaya Bimata(\$3963166),  
Santoso David(\$3824107),  
Polina Rybak(\$3969997)

Supervisor:  
Hoang Phan,  
Thanh Minh