StudyGenius – AI-Powered Study Assistant

# Slide 1: Title Slide

Dishan: Good morning everyone! I’m Dishan from Grade 9…

Laksh: …And I’m Laksh from Grade 12. We’re from Mother Divine Public School, and today we’re excited to present our AI-powered study assistant — StudyGenius.

# Slide 2: Problem Statement

Dishan: Studying large documents can be boring and time-consuming. Students often struggle to understand complex topics or revise long texts quickly.

Laksh: In traditional learning, materials like flashcards and quizzes must be created manually. This is inefficient — especially when AI can do it faster and smarter.

# Slide 3: What is StudyGenius?

Dishan: StudyGenius is like your smart study buddy. It turns documents like PDFs or notes into quick summaries, flashcards, and even quizzes — all with a single click!

Laksh: Technically, it uses Natural Language Processing (NLP) to analyze content, extract key ideas, and generate learning materials. It supports PDFs and TXT files.

# Slide 4: Key Features

Dishan: Here are some amazing features:  
- Clean text extraction  
- Summarized content  
- Flashcards  
- Quizzes  
- Study time estimation  
- Reading difficulty check

Laksh: It also includes five summarization algorithms like TextRank, LSA, and Luhn. The system auto-selects the best algorithm based on the input content.

# Slide 5: Summarization Demo

Dishan: When you upload a file, StudyGenius summarizes it automatically. You can choose how long the summary should be.

Laksh: For example, here we used the LexRank algorithm — a graph-based method that ranks sentences by importance. It works similarly to Google’s PageRank.

# Slide 6: Flashcard & Quiz Generation

Dishan: The app also makes flashcards! You get both definitions and question-answer pairs.

Laksh: It uses keyword extraction and sentence analysis. Quizzes include True/False, Fill in the blanks, and Wh-type questions — like What, Why, or How.

# Slide 7: Analytics

Dishan: StudyGenius shows you how hard the content is and how long it might take to read.

Laksh: We calculate reading level, word density, and even estimate your study time based on text complexity.

# Slide 8: How It Works Internally

Dishan: Behind the scenes, it’s built in Python using PyQt5 for the interface.

Laksh: It has a modular structure:  
- textTransformer.py: for extraction  
- summarizer.py: for summaries  
- flashCard.py and quiz.py: for generating content  
We’ve used NLTK, Sumy, pdfplumber, and more libraries.

# Slide 9: Live Demo Screenshots

Dishan: Here’s what the app looks like — the dashboard, summary viewer, flashcard section, and quiz interface.

# Slide 10: Future Improvements

Dishan: We plan to support more file types like DOCX and EPUB and maybe even add mobile support!

Laksh: We’re also considering cloud sync, AI-powered topic recommendations, and exporting to formats like PDF or Anki flashcards.

# Slide 11: Conclusion

Dishan: So that’s StudyGenius — smart, fast, and helpful.

Laksh: It’s built to make learning efficient using the power of AI. Thank you for your time. We’re happy to take your questions.