

# Generative AI-Powered Multilingual Translator

**Presented by Singh Pratik**

# Objectives

- To develop a translator that supports natural and context-aware multilingual text translation.
- To integrate NLP and LLM models for enhanced language understanding.
- To create an interface that simplifies cross-lingual communication.
- To ensure translation accuracy across diverse languages.

# Challenges & Solutions

- Challenge: Context misinterpretation in translation.
- Solution: Used LLMs with prompt engineering for context-aware output.
- Challenge: Low-resource language support.
- Solution: Leveraged multilingual pre-trained models like mBART or M2M100.
- Challenge: Real-time translation speed.
- Solution: Model optimization and lightweight inference pipeline.
- Challenge: Grammar and sentence structure issues.
- Solution: Post-processing with NLP techniques.

# Advantages

- Enables seamless cross-language communication.
- Supports multiple languages using a single AI model.
- Context-aware translations ensure more natural output.
- Customizable prompts improve adaptability.
- Scalable and easy to integrate with web apps or services.

# Thank You

- Questions & Feedback Welcome!