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ROORKEE, INDIA

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LANGUAGE MODEL

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PROJECT OVERVIEW: LANGUAGE MODEL FOR SUMMARIZATION AND TRANSLATION

- This project creates a versatile tool for text summarization and translation. Users input text in any language and receive summaries and translations in English, Hindi, French, and more. The tool serves students, researchers, businesses, and global communicators.

Extractive Summarization

Abstractive Summarization

Customizable Length

Performance Benchmark

Core Functionalities: Translation

Language Support : Hindi, French and many more

Neural Machine Translation

Back-Translation

Quality Scores
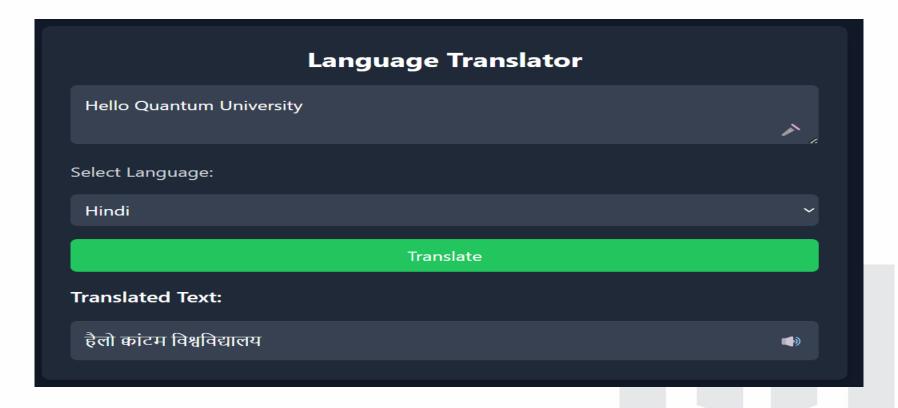
Technical Architecture

Front-end

Language Model

Infrastructure

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User Interface & User Experience (UI/UX)

Language Translator

Hello Quantum University

Select Language:

Hindi

Translate

Translated Text:

हैलो कांटम विश्वविद्यालय

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Source code

```
1   from flask import Flask, request, jsonify
2   from flask_cors import CORS
3   from googletrans import Translator
4
5   app = Flask(__name__)
6   CORS(app)
7
8   translator = Translator()
9
10  @app.route("/")
11  def home():
12      return "Welcome to the Translation API! Use the /translate endpoint to translate text."
13
14  @app.route("/favicon.ico")
15  def favicon():
16      return "", 204
17
18  @app.route("/translate", methods=["POST"])
19  def translate():
20      data = request.get_json()
21      print(f"Received data: {data}")  # Debug log
22      text = data.get("text")
23      target_lang = data.get("target_lang", "hi")  # Default to Hindi
24      translated_text = translator.translate(text, dest=target_lang).text
25      return jsonify({"translated": translated_text})
26
27  if __name__ == "__main__":
28      app.run(debug=True)
```

Future Enhancements

1 Advanced Summarization
Integrate techniques like topic modeling.

2 More Languages
Support additional low-resource languages.

3 Sentiment Analysis
Enable context-aware summarization.

4 Mobile App
Provide on-the-go access to features.

5 User Feedback Loop
Continuously improve accuracy with user data.

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Conclusion

Effective Solutions

Our model excels in summarization and translation.

Strong Performance

Validated by key evaluation metrics.

Continuous Improvement

Planned enhancements will boost user experience.

Q&A Session

Ready to address your questions and feedback.

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Thank YOU