

CRICKHIGH



Introduction

Automatically generate cricket highlights from full-match videos using computer vision and OCR. Detect sixes, wickets, and boundaries in real time—no manual editing, just instant, intelligent highlight reels.

Problem Statement

Manually creating cricket highlights is time-consuming and error-prone. Existing solutions like ball-tracking are accurate but computationally heavy and not user-friendly. There's a need for an efficient, automated system to generate highlights directly from raw match footage using lightweight, accessible technology.

Project Team

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Group Members:

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Methodology

1. Cricket Highlights:

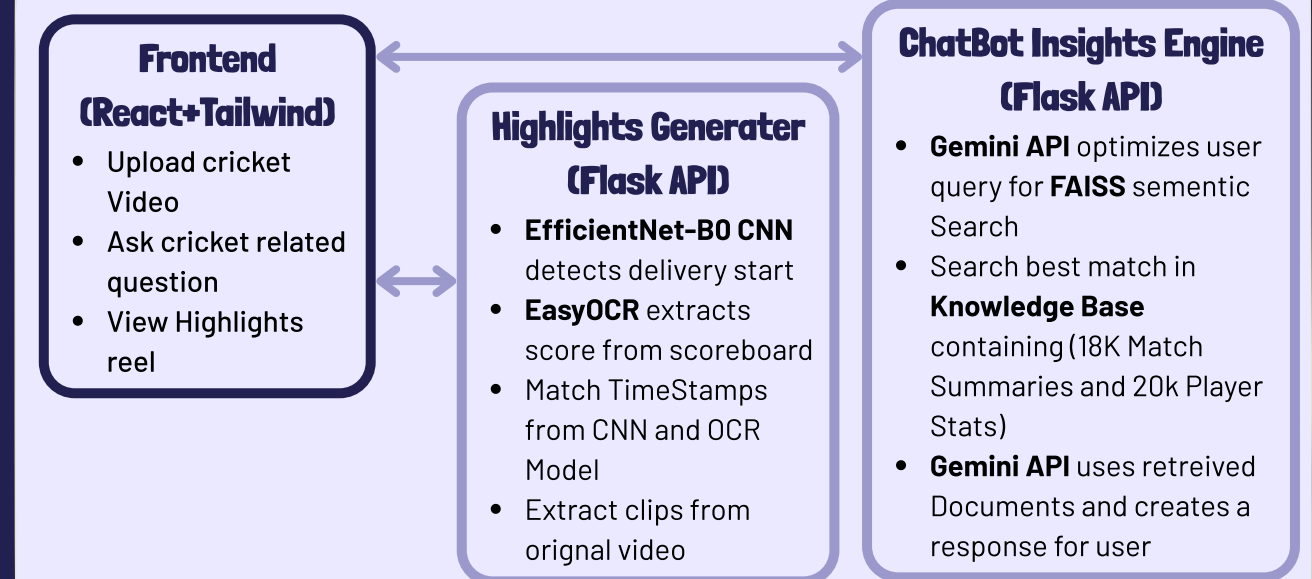
- Video Processing: Extract frames using OpenCV.
- EfficientNet-B0 CNN detects delivery starts.
- EasyOCR extracts score.
- Detect changes for highlight identification[Runs:+4,+6], [Wickets:+1].
- Highlight Assembly: Clips are created by matching CNN and OCR timestamps.

2. Chatbot and Insights:

- Built from 18,000+ matches summaries (international, leagues, men's/women's).
- FAISS performs semantic search and applies boosting to exact matches for better accuracy.
- Gemini API processes user queries and returns natural language responses.

3. Win Prediction:

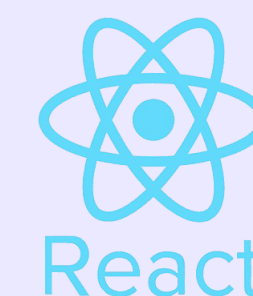
- LightGBM model trained on pre-match ODI World Cup data predicts match outcomes.
- A second LightGBM model updates predictions with live ball-by-ball data.



Conclusion

CrickHigh automates cricket highlight generation, offering interactive features using AI, computer vision, and machine learning. It processes a video in 40-60% of the video run time, with potential improvements through a better CPU. The system reduces GPU dependency in ball tracking, making it more efficient and accessible.

Technologies



Gemini



Flask



PyTorch



Tailwind CSS