Track #2: Youtube AlgoAnalyzer
Renewable & Sustainable Future: Beyond the Videos

Understand YouTube's algorithmic underbelly and its user engagement dynamics.

Tata Power, India's leading green energy solutions company, is dedicated to leading the transition towards a greener, sustainable future. As the world increasingly adopts renewable energy solutions and champions sustainability, understanding public perceptions, knowledge gaps, and broader behavioral patterns becomes paramount.

Deliverables:

- Dashboard for video insights, content optimization tactics, and audience engagement metrics. MarCom Potential: Optimizing video content for maximum reach and engagement, tailored content strategies.

Objective:

- Develop a comprehensive solution using the YouTube Data API v3 to:
- Analyze content and comments focused on renewable energy solutions and sustainability.
- Unearth insights into broader user behavior: What else are these sustainability-focused audiences watching? When and how are they most active?

Tasks:

Data Extraction:

- Pull videos and comments from YouTube related to renewable energy and sustainability.
- Respect API quota limits and YouTube's terms of service.

Sentiment and Knowledge Analysis:

- Gauge public sentiment on renewable energy and sustainability.
- Identify misconceptions or gaps in knowledge related to renewable sources.

Trending Topic Identification:

- Recognize emerging trends within renewable energy and sustainability on YouTube.
- Spot potential content gaps based on user interests.

User Behaviour Analysis:

- Profile users who frequently comment on renewable and sustainability videos: What other video genres are they attracted to?
- Assess engagement metrics: Average viewing duration, interaction frequency, and peak activity times.

Cross-Content Engagement:

- Identify influencers or channels these users watch alongside sustainability content.
- Extract recurring themes or keywords from titles or descriptions of the videos they engage with.

Visualization Dashboard:

- Craft an intuitive dashboard to present the extracted insights for Tata Power's teams and stakeholders.

Recommendation Engine:

- Propose actionable content strategies based on the insights drawn.

- Suggest potential collaborations, optimal content release timings, and cross-genre content avenues based on user behavior.

No.	Judging Criteria	Weightage
1.	Effectiveness: Quality and accuracy of data extraction and analysis.	15%
2.	Innovation: Creative techniques and unique insights presented.	15%
3.	User Experience: Usability and clarity of the developed dashboard.	15%
4.	Scalability: Potential for solution expansion for broader analyses or other platforms.	15%
5.	Holistic Approach: Balance between renewable energy insights, sustainability insights, and behavioral analytics.	15%
6.	Behavioral Insight Accuracy: Precision in user behavior profiling.	10%
7.	Strategic Relevance: Actionability of proposed recommendations and strategies.	10%