Snapshot Objectives

Group 6

Start Objective

The start of the project focuses on establishing the foundation necessary for building the YouTube Comment Comparison Web Application. The main goal of this phase is to clearly define the project's vision and prepare the technical base for development.

Goals

- Define the core purpose and intended functionality of the application.

- Conduct brainstorming sessions to refine features and workflow.

- Determine team roles and responsibilities.

- Establish a version control and collaboration workflow.

Technical Setup

- Initialize the React frontend and Node.js/Fastify backend.

- Configure dependencies such as Axios and environment variables.

- Develop basic frontend pages (homepage and results template).

- Create the initial database schema and connect it to backend services.

- Set up and test basic API routes to verify frontend–backend communication.

1st Checkpoint Objective

This checkpoint reflects on the progress made during the startup phase and shifts focus toward integrating the YouTube API and preparing the system for deployment.

Completed From Previous Stage

- Core architecture established (frontend, backend, database).

- Foundational pages and backend routes created.

- Verified communication across all major components.

New Tasks Added

- Implement YouTube URL validation on the frontend.

- Authenticate and connect to the YouTube Data API.

- Fetch video details, comments, and commenter IDs.

- Store video data and commenter IDs in the database.

Deployment Work

- Deploy the frontend to Vercel.

- Deploy the backend and database to Railway or Supabase.

- Perform end-to-end testing across all deployed services.

2nd Checkpoint Objective

With API integration complete, this checkpoint emphasizes data analysis features and user-facing visualizations.

Reflection on Previous Work

- The system can now fetch and store YouTube video and commenter data.

- Deployment pipeline is set up and functional.

New Tasks Added

- Implement algorithms to compare commenter data across videos.

- Compute shared commenter statistics and percentages.

- Generate per-video insights based on comparison results.

- Create visual components such as:

  - Charts (bar, donut, line, etc.)
  - Tables for numerical breakdowns

- Add filtering and sorting options for user navigation.

Due Date Checkpoint Objective

The final checkpoint focuses on finalizing the application, improving the user interface, and outlining long-term enhancements.

Reflection on Completed Work

- Comparison algorithms implemented and validated.

- Visualization features added to the frontend.

- Deployment is stable and functioning end-to-end.

Finishing Tasks

- Improve UI/UX design for clarity and aesthetics.

- Ensure responsiveness and accessibility across devices.

Future Work (Post-MVP)

- Add a user login/authentication system.

- Implement saving/viewing of comparison history.

- Explore advanced analytics (e.g., sentiment analysis, demographic insights).