

Design Specification Document

Contents

1 Website Breakdown

1.1 Homepage

- Input fields for two Youtube channel URLs.
- Select number of videos and filter method.
- 'Compare' button to start backend process.

1.2 Results Page

- Shows shared commenter count.
- Pie chart showing total percentage of shared commenters vs total commenters
- Shared commenters per video
- Multiple Sorting options

2 Functionalities

2.1 Frontend

- Styling, UI
- Display results after receiving data from backend via charts and sortable tables

2.2 Backend

- Validate channel input
- Grab videos and comments via YouTube API
- Save data into database
- Calculate number of shared commenters
- Return results to frontend

3 Tool Breakdown

3.1 Frontend

- React
- Tailwind CSS (style)
- Recharts (charts)

3.2 Backend

- Node.js (Runtime)
- Fastify (Framework)
- Axios (API)
- PostgreSQL (Database)
- dotenv (Environment Variables)

3.3 Hosting

- Vercel (Frontend Hosting)
- Railway (Backend Hosting)

4 Changelog

- v1 - Base Design Spec covering major functionalities and tools
- v2 - Inclusion of Hosting
- v3 - Included a little more detail