
Datalytics

by Byte Peeps



System Design document

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CRC Cards

Database Model Classes

* Newly added components for this sprint are in purple

| User | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Database model for application users | | Fields <ul style="list-style-type: none"> username: string password: string deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookApi InstagramApi YouTubeChannel TwitterUser RedditSubreddit YelpBusiness GoogleReviewsAccount |

| FacebookApi | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Facebook APIs | | Fields <ul style="list-style-type: none"> token: string isActive: boolean userId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookPost |

| FacebookPost | |
|---|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Facebook posts | Fields <ul style="list-style-type: none"> message: string date: Date likes: number loves: number cares: number hahas: number wows: number sads: number angrys: number |

| | | |
|------------------------------|--------------------------|--|
| | | <ul style="list-style-type: none"> dataId: string |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookApi FacebookMedia |

| FacebookComment | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Facebook comments | | Fields <ul style="list-style-type: none"> dataId: string username: string message: string date: Date likes: number sentimentAnalysis: string topicClassification: string subjectivityAnalysis: string postId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookPost |

| InstagramApi | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Instagram API | | Fields <ul style="list-style-type: none"> facebookApId: number userId: number noId: string |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookApi InstagramMedia |

| InstagramMedia | | |
|--|--|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Instagram media | | Fields <ul style="list-style-type: none"> dataId: string caption: string date: Date likes: number numComments: |

| | | |
|------------------------------|--------------------------|--|
| | | number <ul style="list-style-type: none"> • apild: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> • InstagramApi • InstagramComment |

| InstagramComment | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Database model for Instagram comments | | Fields <ul style="list-style-type: none"> • dataId: string • userName: string • message: string • date: Date • likes: number • sentimentAnalysis: string • topicClassification: string • subjectivityAnalysis: string • mediaId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> • InstagramMedia |

| InstagramTag | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Database model for Instagram tags, which are basically posts that the user is tagged in | | Fields <ul style="list-style-type: none"> • dataId: string • username: string • caption: string • date: Date • likes: number • numComments: number • sentimentAnalysis: string • topicClassification: string • subjectivityAnalysis: string • apild: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> • InstagramApi |

| YouTubeChannel |
|----------------|
|----------------|

| | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for YouTube channels | | Fields <ul style="list-style-type: none"> resourceId: string name: string userId: string |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> YouTubeVideo |

| YouTubeVideo | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Database model for YouTube videos | | Fields <ul style="list-style-type: none"> resourceId: string date: number views: number likes: number channelId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> YouTubeChannel YouTubeComment |

| YouTubeComment | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for YouTube videos | | Fields <ul style="list-style-type: none"> resourceId: string userName: stringr message: number likes: number sentimentAnalysis: string topicClassification: string subjectivityAnalysis: string videoid: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> YoutubeVideo |

| TwitterUser | |
|--|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Twitter users | Fields <ul style="list-style-type: none"> twitterId: string userName: string userId: string |

| | | |
|------------------------------|--------------------------|--|
| | | <ul style="list-style-type: none"> deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> User TwitterTweet |

| TwitterTweet | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Twitter tweets | | Fields <ul style="list-style-type: none"> twitterId: string conversationId: string text: string date: Date retweets: number replies: number likes: number deletedAt: Date twitterUserId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> TwitterConversation TwitterUser |

| TwitterConversation | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Twitter conversations | | Fields <ul style="list-style-type: none"> twitterId: string text: string date: Date retweets: number replies: number likes: number sentimentAnalysis: number topicClassification: number subjectivityAnalysis: number deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> TwitterTweet |

| RedditSubreddit | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Reddit subreddits | | Fields <ul style="list-style-type: none"> name: string userId: string deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> User RedditListing |

| RedditListing | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Reddit listings | | Fields <ul style="list-style-type: none"> dataId: string title: string text: string date: Date score: number numComments: number permalink: string deletedAt: Date Sentimentanalysis: string Subjectivityanalysis: string Topic classification: string subredditId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> RedditSubreddit RedditComment |

| RedditComment | |
|--|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Reddit comments | Fields <ul style="list-style-type: none"> dataId: string text: string date: Date score: number replies: number sentimentAnalysis: number topicClassification: number subjectivityAnalysis: number deletedAt: Date |

| | | |
|------------------------------|--------------------------|---|
| | | <ul style="list-style-type: none"> listingId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> RedditListing |

| GoogleReviewsAccount | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Google Reviews accounts | | Fields <ul style="list-style-type: none"> token: string accountId: string isActive: boolean userId: string deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> User GoogleReviewsLocation |

| GoogleReviewsLocation | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Database model for Google Reviews locations | | Fields <ul style="list-style-type: none"> locationId: string accountId: number deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> TwitterConversation GoogleReviewsAccount GoogleReviewsReview |

| GoogleReviewsReview | |
|--|---|
| Responsibilities <ul style="list-style-type: none"> Database model for Google Reviews review | Fields <ul style="list-style-type: none"> title: string review: string reviewer: string rating: number response: string date: Date reviewId: string sentimentAnalysis: number topicClassification: number |

| | | |
|------------------------------|--------------------------|---|
| | | <ul style="list-style-type: none"> • subjectivityAnalysis: number • deletedAt: Date • locationId: number |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> • GoogleReviewsLocation |

| YelpBusiness | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Database model for Yelp business | | Fields <ul style="list-style-type: none"> • businessId: string • name: string • userId: number • deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> • User • YelpReview |

| YelpReview | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Database model for Yelp review | | Fields <ul style="list-style-type: none"> • dataId: string • rating: number • text: string • userName: string • date: Date • sentimentAnalysis: string • topicClassification: string • subjectivityAnalysis: string • deletedAt: Date |
| Parent Class Model | Sub Class None | Collaborations <ul style="list-style-type: none"> • businessId • business |

Backend CRC Classes

facebook/reddit/setup/twitter/user/youtube

| Controller/Instagram/Comment | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for instagram comments | | Endpoints <ul style="list-style-type: none"> getCommentById() getCommentsByMediaId() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/Comment DatumBox InstagramComment keywordExtraction |

| Controller/Instagram/media | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoints for posts made by the user company | | Fields <ul style="list-style-type: none"> getMediaById() getMediaByUserId() getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/Comment InstagramMedia |

| Controller/Instagram/Stats | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> getInstagramStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> InstagramApi InstagramComment InstagramMedia InstagramTag User |

| Controller/Instagram/tag | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for instagram tags | | Fields <ul style="list-style-type: none"> getTagById() getTagsByMediaId() getTagsSentimentAnalysis() getTagsSubjectivityAnalysis() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/Tag DatumBox InstagramTag |

| Controller/Facebook/Comment | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for Facebook comments | | Fields <ul style="list-style-type: none"> getComments() getCommentsByPostId() getCommentsSubjectivityAnalysis() getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookApi FacebookComment FacebookPost User keywordExtraction |

| Controller/Facebook/Post | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for Facebook posts | | Fields <ul style="list-style-type: none"> getPosts() getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookApi FacebookComment |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> • FacebookPost • User |
|--|--|--|

| Controller/Facebook/Stats | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> • getFacebookStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • FacebookApi • FacebookComment • FacebookPost • User |

| Controller/Youtube/Comment | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for youtube comments | | Endpoints <ul style="list-style-type: none"> • getCommentById() • getAllComments() • getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/YouTube/Comment • YoutubeComment • keywordExtraction |

| Controller/Youtube/channel | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for youtube channels | | Fields <ul style="list-style-type: none"> • getChannelById() • getAllChannels() • createChannel() • deleteChannel() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/YouTube/Comment • YoutubeChannel |

| Controller/Youtube/stats | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> getYoutubeStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> YouTubeChannel YouTubeComment YouTubeVideo User |

| Controller/Youtube/video | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for youtube videos | | Fields <ul style="list-style-type: none"> getVideoById() getAllVideos() deleteVideo() createVideo() getSentimentAnalysisForTimeSeries() |
| Parent Class MNoneodel | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Youtube/Video YoutubeVideo |

| Controller/Reddit/Comment | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for Reddit comments | | Fields <ul style="list-style-type: none"> getComments() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> RedditComment RedditListing RedditSubreddit |

| Controller/Reddit/Listing |
|---------------------------|
|---------------------------|

| | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for Reddit Listing | | Fields <ul style="list-style-type: none"> getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> RedditComment RedditListing RedditSubreddit User |

| Controller/Reddit/Stats | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> getRedditStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> RedditComment RedditListing RedditSubreddit |

| Controller/Twitter/Tweets | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Has the API endpoint implementations for Twitter Tweet | | Fields <ul style="list-style-type: none"> getTwitterTweets() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> TwitterUser |

| Controller/Twitter/Stats | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> getTwitterStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> TwitterUser TwitterTweet TwitterConversation |

| Controller/Google Reviews/Stats | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> getGoogleReviewsStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> GoogleReviewsAccount GoogleReviewsLocation GoogleReviewsReview |

| Controller/Google Reviews/Comments | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the reviews for the comments table and word clouds | | Fields <ul style="list-style-type: none"> getComments() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> GoogleReviewsAccount GoogleReviewsLocation GoogleReviewsReview |

| Controller/Yelp/Stats | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> getYelpStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> YelpBusiness YelpReview |

| Controller/Yelp/Comments | | |
|---|------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides the reviews for the comments table and word clouds | | Fields <ul style="list-style-type: none"> getComments() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData |
| Parent Class | Sub Class | Collaborations |

| | | |
|------|------|--|
| None | None | <ul style="list-style-type: none"> • YelpBusiness • YelpReview |
|------|------|--|

| Controller/Setup/facebook | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for setting up Facebook API | | Fields <ul style="list-style-type: none"> • getPages() • connectPage() • getCurrentPage() • populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/Setup/facebook • User • FacebookApi • FacebookPost • FacebookComment |

| Controller/Setup/instagram | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for setting up Instagram API | | Fields <ul style="list-style-type: none"> • getSettings() • connectPage() • populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/Setup/instagram • User • FacebookApi • InstagramApi • InstagramMedia • InstagramComment |

| Controller/Setup/Reddit | |
|--|--|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for setting up Reddit API | Fields <ul style="list-style-type: none"> • getSettings() • connectPage() |

| | | |
|-----------------------------|--------------------------|---|
| | | <ul style="list-style-type: none"> • <code>populateFirstTime()</code> |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/Setup/reddit |

| Controller/Setup/Twitter | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for setting up Twitter API | | Fields <ul style="list-style-type: none"> • <code>getSettings()</code> • <code>connectPage()</code> • <code>populateFirstTime()</code> |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/Setup/twitter |

| Controller/Setup/Yelp | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for setting up Yelp API | | Fields <ul style="list-style-type: none"> • <code>getSettings()</code> • <code>connectPage()</code> • <code>populateFirstTime()</code> |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/Setup/yelp |

| Controller/Setup/Youtube | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Has the API endpoint implementations for setting up Youtube API | | Fields <ul style="list-style-type: none"> • <code>getSettings()</code> • <code>connectPage()</code> • <code>populateFirstTime()</code> |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Routes/Setup/youtube |

| Controller/Overview/Stats | | |
|---|------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Provides the stats for the ui cards | | Fields <ul style="list-style-type: none"> • <code>getOverviewStats()</code> |
| Parent Class | Sub Class | Collaborations |

| | | |
|------|------|---|
| None | None | <ul style="list-style-type: none">• FacebookApi• FacebookPost• InstagramMedia• InstagramPost• TwitterTweet• TwitterUser• RedditListing• RedditSubreddit• YouTubeChannel• YoutubeVideo• GoogleReviewsAccount• GoogleReviewsLocation• GoogleReviewsReview• YelpBusiness• YelpReview |
|------|------|---|

Routing CRC Classes

facebook/reddit/setup/twitter/user/youtube

| Routes/Instagram/Comment | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getComments() getCommentsByMediaId() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Instagram/Comment keywordExtraction |

| Routes/Instagram/media | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getMediaById() getMediaByUserId() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Instagram/media |

| Routes/Instagram/tag | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getTagById() getTagsByMediaId() getTagsSentimentAnalysis() getTagsSubjectivityAnalysis() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Instagram/tag |

| Routes/Instagram/Stats | | |
|--|------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getInstagramStats() |
| Parent Class | Sub Class | Collaborations |

| | | |
|------|------|--|
| None | None | <ul style="list-style-type: none"> Controller/Instagram/Stats |
|------|------|--|

| Routes/Youtube/Comment | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getComments getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Youtube/Comment |

| Routes/Youtube/channel | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getChannelById() getAllChannels() createChannel() deleteChannel() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Youtube/channel |

| Routes/Youtube/video | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getVideoById() getAllVideos() createVideo() deleteVideo() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Youtube/video |

| Routes/Facebook/Comment | |
|--|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | Endpoints <ul style="list-style-type: none"> getComments() getCommentsByPostId() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData() |

| | | |
|-----------------------------|--------------------------|--|
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Facebook/Comment |
|-----------------------------|--------------------------|--|

| Routes/Facebook/Post | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Facebook/Post |

| Routes/Facebook/Stats | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getFacebookStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Facebook/Stats |

| Routes/Reddit/Comment | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getComments() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Reddit/Comment |

| Routes/Twitter/Comment | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getComments() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Twitter/Comment |

| Routes/Twitter/Tweet | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Twitter/Tweet |

| Routes/Twitter/Stats | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getTwitterStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Twitter/Stats |

| Routes/Reddit/Listing | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Reddit/Listing |

| Routes/Reddit/Stats | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getRedditStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Reddit/Stats |

| Routes/YouTube/Video | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getSentimentAnalysisForTimeSeries() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/YouTube/Video |

| Routes/YouTube/Stats | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getYouTubeStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/YouTube/Stats |

| Routes/GoogleReviews/Stats | | |
|----------------------------|--|--|
|----------------------------|--|--|

| | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getYoutubeStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/YouTube/Stats |

| Routes/Yelp/Stats | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getYelpStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Yelp/Stats |

| Routes/Yelp/Comments | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getComments() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Yelp/Comments |

| Routes/GoogleReviews/Stats | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getGoogleReviewsStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/GoogleReviews/Stats |

| Routes/GoogleReviews/Comments | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getComments() getCommentsSentimentAnalysis() getCommentsSubjectivityAnalysis() getWordCloudData() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/GoogleReviews/Comments |

| Routes/Overview/Stats | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Endpoints <ul style="list-style-type: none"> getOverviewStats() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Overview/Stats |

| Routes/Setup/facebook | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getPages() connectPage() getCurrentPage() populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Setup/facebook |

| Routes/Setup/instagram | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getSettings() connectPage() populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Setup/instagram |

| Routes/Setup/twitter | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getSettings() connectUser() populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Setup/twitter |

| Routes/Setup/youtube | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getSettings() connectUser() populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Setup/youtube |

| Routes/Setup/reddit | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getSettings() connectSubreddit() populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Setup/reddit |

| Routes/Setup/yelp | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Maps API endpoints to their routes | | Fields <ul style="list-style-type: none"> getSettings() searchBusiness() connectBusiness() populateFirstTime() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Setup/yelp |

| DatumBox | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Creates a wrapper for calling the datumbox external machine learning api | | Endpoints <ul style="list-style-type: none"> DatumBoxAPICall |
| Parent Class None | Sub Class None | Collaborations None |

| TableFilter | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Middleware for extracting filters applied on tables | | Fields <ul style="list-style-type: none"> getNumberEqualsFilter() getStringContainsFilter() createFilterCondition() getNumberEqualsFilter() getStringContainsFilter() renameTableFilterField() removeTableFilterField() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Controller/Facebook/Comment Controller/Instagram/Comment Controller/YouTube/Comment Controller/Reddit/Comment Controller/Twitter/Comment Controller/GoogleReviews/Comment Controller/Yelp/Comment |

| Keyword Extraction | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Creates a wrapper to extract the latest keywords from a string text | | Endpoints <ul style="list-style-type: none"> KeywordExtraction |
| Parent Class None | Sub Class None | Collaborations None |

Pipeline CRC Classes

| dataPipelines/facebook | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Runs daily jobs to synchronize the database data with the facebook platform data | | Fields <ul style="list-style-type: none"> startPipeline() updateAccountPost() updatePostComments() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookApi FacebookPost FacebookComment DatumBoxAPICall CronJob |

| dataPipelines/twitter | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Runs daily jobs to synchronize the database data with the twitter platform data | | Fields <ul style="list-style-type: none"> startPipeline() updateUserTweets() updateTweetConversation() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> TwitterUser TwitterTweet TwitterConversation DatumBoxAPICall CronJob |

| dataPipelines/instagram | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Runs daily jobs to synchronize the database data with the instagram platform data | | Fields <ul style="list-style-type: none"> startPipeline() updateAccountMedia() updateAccountTags() updateMediaComments() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> InstagramApi InstagramMedia InstagramTag |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> • InstagramComment • DatumBoxAPICall • CronJob |
|--|--|--|

| dataPipelines/yelp | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Runs daily jobs to synchronize the database data with the yelp platform data | | Fields <ul style="list-style-type: none"> • startPipeline() • updateComment() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • YelpBusiness • YelpReview • CronJob |

| dataPipelines/reddit | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Runs daily jobs to synchronize the database data with the reddit platform data | | Fields <ul style="list-style-type: none"> • startPipeline() • updateListings() • updateComment() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • RedditSubreddit • RedditListing • RedditComment • DatumBoxAPICall • CronJob |

| dataPipelines/youtube | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Runs daily jobs to synchronize the database data with the Youtube platform data | | Fields <ul style="list-style-type: none"> • startPipeline() • updateVideos() • updateVideoStatistics() • updateComments() |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • YoutubeChannel • YoutubeVideo |

| | | |
|--|--|---|
| | | <ul style="list-style-type: none"> • Youtube Comment • GoogleReviewsLocation • GoogleReviewsReview • DatumBoxAPICall • CronJob |
|--|--|---|

| dataPipelines/googleReviews | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Runs daily jobs to synchronize the database data with the Google Reviews platform data | | Fields <ul style="list-style-type: none"> • startPipeline() • updateLocationReviews() • googleReviewsScheduledJob |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • GoogleReviewsAccount • GoogleReviewsLocation • GoogleReviewsReview • DatumBoxAPICall • apis/googleReviews • CronJob |

Frontend Auth Classes

| Sign In | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Allow users to login using a username and a password • Users can choose to register an account if they don't have one, and they will be redirected to a sign up page • Users will be redirected to the home page after successful login | | Fields <ul style="list-style-type: none"> • N/A |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Auth Storage • Notification • User Slice |

| Sign Up | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Allow users to sign up an account • After sign up, the user can choose to go back to the login page | | Fields <ul style="list-style-type: none"> • N/A |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Auth Storage • Notification • User Slice |

| Sign Out Button | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Contains a styled version of the sign out button and handles the sign out logic | | Fields <ul style="list-style-type: none"> • None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Web App Slice4 |

| Is Signed In | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Checks that the user is signed in before displaying the component that is given to it as a field | | Fields <ul style="list-style-type: none"> children |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> User Slice |

| Auth Storage | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Handles session retrieval and storage | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| User Slice | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Redux slice that contains the user information | | Fields <ul style="list-style-type: none"> Username signInStatus signUpStatus signOutStatus errorMessage |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| User Info | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Fetches the username from the User Slice | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> User Slice |

| Auth Checker | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none">Ensures that if a user attempts to log in with a different account on a different tab, the current tab is logged out | | Fields <ul style="list-style-type: none">None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none">Auth Storage |

Pages Classes

| App | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Stores the top level components for the frontend | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Router Component MUI Theme |

| Dashboard | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Provide a summary of reported statistics | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class None | Sub Class None | Collaborations None |

| ReviewApps | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Provides statistics gathered from review apps | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> GoogleReviews Tab Yelp Tab |

| SocialMedia | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Provides statistics gathered from social media | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> FacebookTab Youtube Tab Reddit Tab Instagram Tab Twitter Tab |

| Settings | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Interface to access different tabs about different platform setups | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Facebook Setup Tab Youtube Setup Tab Reddit Setup Tab Instagram Setup Tab Twitter Setup Tab Yelp Setup Tab |

| Google Reviews Tab | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the google reviews tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| Yelp Tab | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the yelp tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| Facebook Tab | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the facebook tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Time Series Chart Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| Instagram Tab | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the instagram tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Time Series Chart Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| Twitter Tab | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the Twitter tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Time Series Chart Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| Reddit Tab | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the reddit tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Time Series Chart Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| YouTube Tab | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Organizes all the components that will be displayed on the youtube tab page | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Time Series Chart Sentiment Analysis Chart Subjectivity Analysis Chart Card Header Comments Table Word Cloud |

| Facebook Setup Tab | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Interface for the user to set up their facebook connection | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Notification Facebook Setup Slice |

| Instagram Setup Tab |
|---------------------|
|---------------------|

| | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Interface for the user to set up their instagram connection | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Notification Instagram Setup Slice |

| Twitter Setup Tab | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Interface for the user to set up their twitter connection | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Notification Twitter Setup Slice |

| Reddit Setup Tab | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Interface for the user to set up their reddit connection | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Notification RedditSetup Slice |

| Youtube Setup Tab | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Interface for the user to set up their youtube connection | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Notification YouTube Setup Slice |

| Yelp Setup Tab | |
|--|-----------------------|
| Responsibilities <ul style="list-style-type: none"> Interface for the user to set up their yelp connection | Fields None |

| | | |
|-----------------------------|--------------------------|---|
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none">• Notification• Yelp Setup Slice |
|-----------------------------|--------------------------|---|

Navigation Classes

| Protected Route | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Creates a Route and only allows navigation to that route if the user is signed in | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Auth Storage |

| Router Component | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Creates the routes of the different pages of the platform | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Protected Route Header Auth Checker |

| Side Nav | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Fetches the username from the User Slice | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> User Slice Web App Slice |

Chart Classes

| TimeSeries Chart | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Show sentiment analysis of posts over a time range Show subjectivity analysis of posts over a time range | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class Social media tabs | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/media Routes/Facebook/post Routes/Twitter/tweet Routes/Reddit/listing Routes/YouTube/video |

| Pie Chart | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Show sentiment analysis of a post | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class Social media tabs | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/comments Routes/Facebook/comments |

| Comments Table | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Show comments of posts | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class Social media tabs | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/comments Routes/Facebook/comments Routes/Twitter/comments Routes/Reddit/comments Routes/YouTube/comments |

| Posts Table | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Show posts of social media | | Fields <ul style="list-style-type: none"> N/A |
| Parent Class Social media tabs | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Reddit/Listing |

| Card Info | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Shows metrics that go on UI cards at the top of each page | | Fields <ul style="list-style-type: none"> Data isLoading error |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| Cards Generator | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Receives data in a list and generates as many Card Info as necessary to display each metric in the data as a card | | Fields <ul style="list-style-type: none"> cardData cardDataLength isLoading error |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Card Info |

| Card Charts | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Shows the charts in a consistently formatted manner | | Fields <ul style="list-style-type: none"> name children error |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| Card Header | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Fetches the data for the header component of the page depending on the platform being viewed by the user and passes it to the Cards Generator | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Cards Generator Web App Slice Date Selector Slice Routes/Instagram/stats/cards Routes/Facebook/stats/cards Routes/Twitter/stats/cards Routes/Reddit/stats/cards Routes/YouTube/stats/cards Routes/Yelp/stats/cards Routes/GoogleReviews/stats/cards Routes/Overview/stats/cards |

| Post Analysis | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations None |

| Word Cloud | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Shows most frequent words and phrases found in comments | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Routes/Instagram/comments Routes/Facebook/comments Routes/Twitter/comments Routes/Reddit/comments Routes/YouTube/comments |

Reusable Classes

| Error Message | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Displays the given error in a consistently formatted fashion | | Fields <ul style="list-style-type: none"> error |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| Notification | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Renders a default template for notifications | | Fields <ul style="list-style-type: none"> state |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> NotificationState |

| Logo | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Contains a styled version of our logo | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| PageName | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Contains a styled version of the current page that the user is viewing | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> Web App Slice |

| Loader | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Displays a loading icon in a consistently formatted fashion | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| No Data | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> Displays a no data message in a consistently formatted fashion | | Fields <ul style="list-style-type: none"> None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> None |

| Tab Panel | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> Takes a page to render as a tab page when used with React MUI to ensure each tab page has consistent styling | | Fields <ul style="list-style-type: none"> className Index value children |
| Parent Class None | Sub Class None | Collaborations None |

Other

| Date Selector Slice | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains the current date range selected by the user | | Fields <ul style="list-style-type: none"> • startDate • endDate |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • None |

| Date Selector | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • The frontend component that the user interacts with to set the date | | Fields None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Data Selector Slice |

| Web App Slice | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the general states of the application, such as which page and subpage the user is currently viewing | | Fields <ul style="list-style-type: none"> • pageName • appName |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • None |

| Facebook Setup Slice | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the facebook setup page | | Fields <ul style="list-style-type: none"> • Stage • pages • currentPage |
| Parent Class None | Sub Class None | Collaborations None |

| Instagram Setup Slice | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the instagram setup page | | Fields <ul style="list-style-type: none"> • status • pages • connectedPageId |
| Parent Class None | Sub Class None | Collaborations None |

| Yelp Setup Slice | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the yelp setup page | | Fields <ul style="list-style-type: none"> • status • business • newBusiness • searchObject • searchResults |
| Parent Class None | Sub Class None | Collaborations None |

| Twitter Setup Slice | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the twitter setup page | | Fields <ul style="list-style-type: none"> • status • username • newUsername |
| Parent Class None | Sub Class None | Collaborations None |

| YouTube Setup Slice | | |
|--|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the youtube setup page | | Fields <ul style="list-style-type: none"> • status • channel • newChannel |
| Parent Class None | Sub Class None | Collaborations None |

| Reddit Setup Slice | | |
|---|--------------------------|---|
| Responsibilities <ul style="list-style-type: none"> • Redux slice that contains information about the reddit setup page | | Fields <ul style="list-style-type: none"> • status • subreddit • newSubreddit |
| Parent Class None | Sub Class None | Collaborations None |

| Header | | |
|---|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Displays the header of the applications and all the classes that make up the header | | Fields <ul style="list-style-type: none"> • None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • Is Signed In • Page Name • Logo • Data Selector • Sign Out Button • User Info |

| Mui Theme | | |
|--|--------------------------|--|
| Responsibilities <ul style="list-style-type: none"> • Creates the React MUI theme for the platform | | Fields <ul style="list-style-type: none"> • None |
| Parent Class None | Sub Class None | Collaborations <ul style="list-style-type: none"> • None |

System Interaction

Client:

The frontend is designed to run on Chrome, a chromium engine based website, and Firefox.

Local Development:

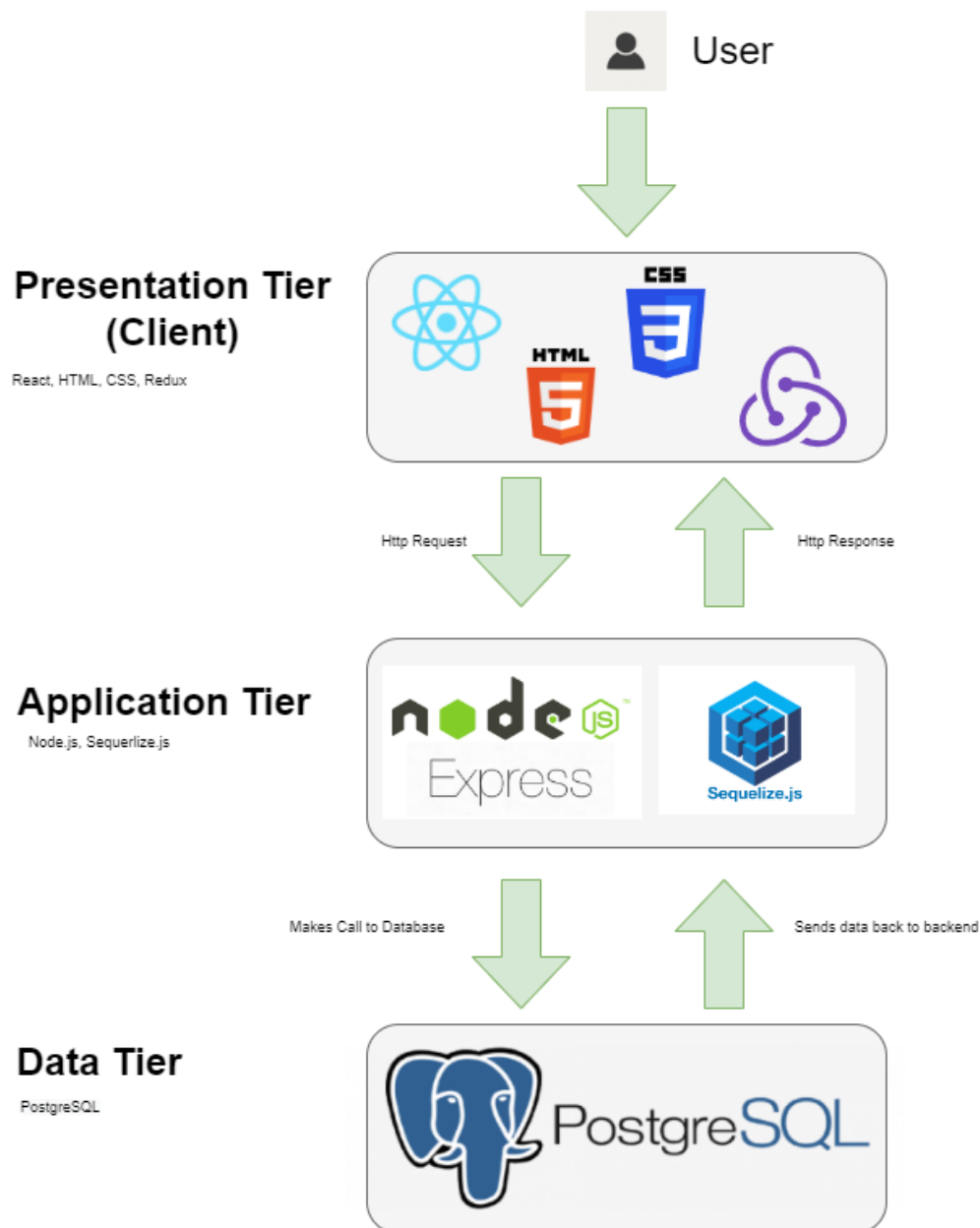
There are no assumptions based on the operating system, the README.md instructions are provided for Windows and Mac/Linux. There are no dependencies on the DB's and network configuration.

Deployed System:

We are using docker containers to deploy each component of our application, hence inherently there are no dependencies on the environment of the virtual machine. The network will be configured in the future with CORS so that it is only allowed to communicate with the frontend that is hosted on our domain.

System Architecture

The application utilizes the **Three-Tier Architecture**, consisting of three layers, the presentation layer, application layer and data layer. Our presentation tier uses the React framework for building graphic user interfaces. The presentation tier also consists of tools such as Redux that allow us to write clean code. The presentation tier uses the http transfer protocol to communicate to the application tier which consists of a Node/Express server. The Express server utilizes the sequelize.js library to connect to the data tier, which consists of a postgresSQL database.



Reference for this article: <https://www.ibm.com/cloud/learn/three-tier-architecture>

System Decomposition

Client Decomposition:

The client is using a web browser to access the website. This means that the client's browser makes a GET request to the server and fetches the frontend. The client interacts with the frontend to make API requests with the backend servers using predefined URLs. These requests are routed in EXPRESS (running on NodeJS) to the correct API endpoint and if the user request is legal, it is allowed. These endpoints use sequelize to communicate with our Postgres database.

Local Development System Decomposition:

Assuming the developer has followed the README.md and completed the installation correctly, they should be able to simply start a frontend server that tracks their continuous changes in the code. The developer should also have a simultaneously running backend server that also tracks their continuous code changes while developing. The local frontend communicates directly with the backend through the local URL. Furthermore, the database is also running the local machine using the built-in Postgres server program. The backend communicates with the database server locally using a URL as well. In case of any errors, these will be

Deployed System Decomposition:

The deployed system works based on docker containers running on the same virtual machine rented from digital ocean. Each of the frontend, backend and database have their own URL and associated docker container. The communication between them is done using TLS to ensure the security and integrity of communication. All servers/docker containers are running at the same time. In addition, there is another container running NGINX to act as a reverse proxy to the requests that are coming into the server and handle the TLS certificate.