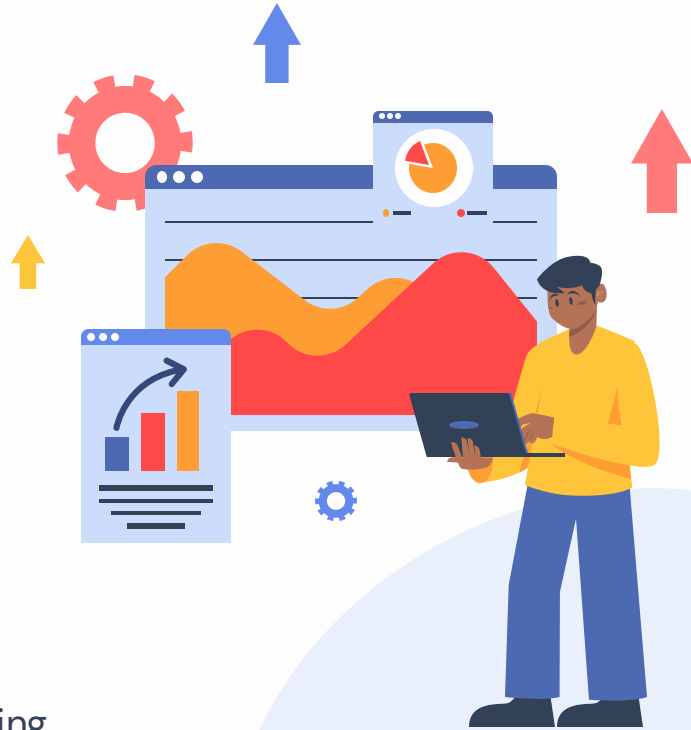


Meme Analytics Bot

AI -powered Meme Scraping, Analysis & Reporting

By: Shaune Ang





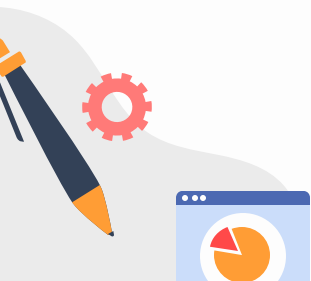
Guiding Objective

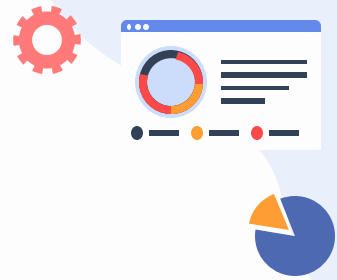
**Give creators an insight for them to have
the best chance of getting popular**



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- 6 Challenges and Pitfalls
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Key Decisions



Fetching Frequency

Once every hour to obtain
an even spread of data



NoSQL Database

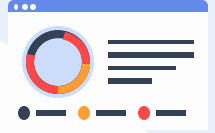
Flexible semi-structured
data
Quick implementation



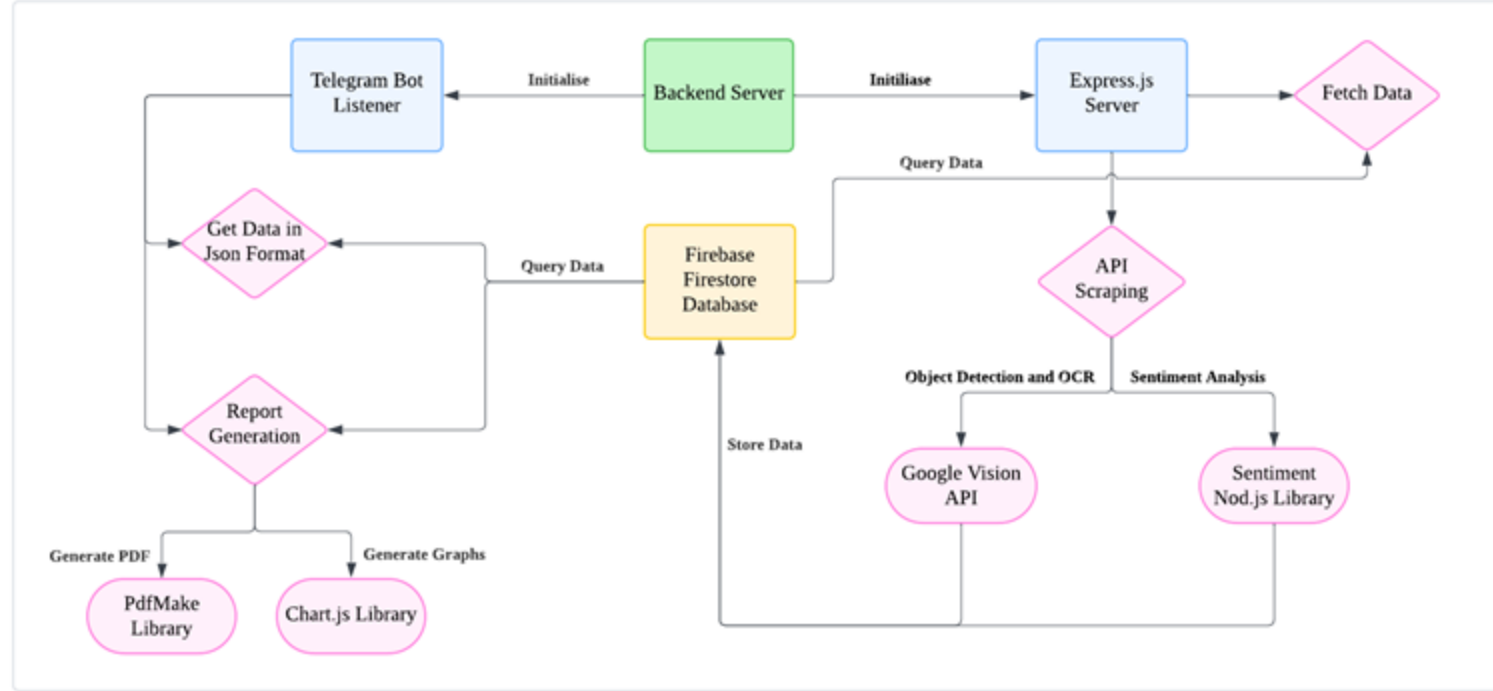
Popularity Metric

Up vote count used to
determine popularity





System Overview



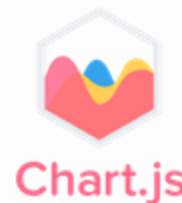
Techstack



Backend	Purpose
Node.js + Express.js	Backend API & server logic
Firebase Firestore	NoSQL database for meme storage
Reddit API	Fetching trending memes

Analysis	Purpose
Google Vision AI	Image recognition & OCR
Sentiment	Sentiment analysis
Compromise NLP	Text analysis & keyword extraction

Report	Purpose
Chart.js + ChartJS Node Canvas	Data visualization
pdfmake	PDF report generation
Telegram Bot API	User interaction





Core Features

Divide the class into small groups of 3-5 students. Assign each group a **real-life application** for which they will have to use **math concepts** to solve

Periodically Scrape Memes

Up to date database

1. ——— 2.



Topics

Graph-Based Insights & Trends

- Meme popularity over time
- Vote ratios & comment trends
- Text & image correlation

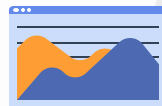
Telegram Report Generation

Easy user interaction

3. ——— 4.

AI & NLP Meme Analysis

- Image Text Extraction (OCR)
- Sentiment & Keyword Analysis
- Object Detection



Report Content

Refer to attached Report Sample





Challenges and Pitfalls



Categorisation of Memes

Limited time to train a categorising model



Keyword Extraction Relevance

Unable to obtain relevant keywords from meme

Possible Remedy:

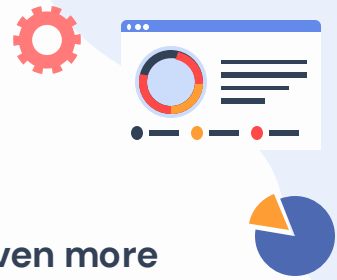
Reprocess keywords before storing



Image Recognition and NLP Accuracy

Constrained to free tier models





Future Developments

These are some nice-to-have developments that could have been made given more time.

- 1 Categorical Analysis of Top Performing Memes
- 2 Web dashboard with interactive meme analytics, live charts and data



Thank you!

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