

Senior AI Engineer Assignment

Pulsegen Technologies

Duration: 24 hours

Task

Take Google Play Store reviews from June 2024-till date for Swiggy/Zomato/Any Popular app of your choice. Daily data should be treated as a batch. Assume starting from June 1st, 2024, everyday you receive data with reviews.

Your AI agent should consume the daily data and create a trend analysis report for issues, requests and feedback in the reviews.

Output Requirements

The report should be a table where:

- **Rows:** Topics (related to issues, requests, feedback, etc.)
- **Columns:** Dates from T to T-30
- **Cells:** Frequency of topic occurrence on that date

The output report for date T should show a trend from T-30 to T.

Example Report Structure:

Topic	Jun 1	Jun 2	Jun 3	...	Jun 30
Delivery issue	12	8	15	...	23
Food stale	5	7	3	...	11
Delivery partner rude	8	12	6	...	9
Maps not working properly	2	4	7	...	5
Instamart should be open all night	1	0	3	...	4
Bring back 10 minute bolt delivery	0	2	1	...	6

Topic Requirements

Example topics for Swiggy:

- Delivery issue
- Food stale
- Delivery partner rude
- Maps not working properly
- Instamart should be open all night
- Bring back 10 minute bolt delivery

You can provide seed topics to start but ensure your agent identifies new evolving topics and creates new categories as needed.

Technical Constraints

Required: Use Agentic AI approaches. Traditional approaches like TopicBERT or LDA are not acceptable due to accuracy limitations.

Key Challenge: Similar but not identical topics being created as different categories, which creates inaccurate trends.

Example Problem:

- "Delivery guy was rude"
- "Delivery partner behaved badly"
- "Delivery person was impolite"

These should be consolidated into single topic: "Delivery partner rude"

Solutions: Implement high recall agents or use deduplication approaches. Consider taxonomy or ontology-based methods.

Input/Output

Input: App store link and target date

Output: Trend analysis report table as specified above

Deliverables

1. **Private GitHub Repository** - Share with vatsal@pulsegen.io
2. **Video Demonstration** - Upload to Google Drive
3. **Sample Output Reports** - Include in [/output/](#) folder

Evaluation Focus

The AI agent should have high recall to ensure relevant topics have valid trends. End users (product teams) will consume this report to identify most trending topics and new evolving issues.

Submission: 24 hours from assignment start