

Title: Fynd AI Intern Take-Home Assessment

1) Introduction

A complete AI-powered review feedback system with two main components: (1) Task 1 notebook for Yelp star rating prediction using prompting, and (2) Task 2 two-dashboard web app (User + Admin) with LLM-generated responses, summaries, and recommendations.

2) Task 1: Rating Prediction

- Approaches: Zero-Shot, Few-Shot, Chain-of-Thought.
- Dataset: Yelp reviews (sampled).
- Output format: JSON { "predicted_stars": n, "explanation": "..." }.
- Evaluation (reduced sample: 10 reviews, 1s throttle, due to API quota):
- Zero-Shot: Exact 60%, Within ± 1 100%, JSON validity 100%, Avg latency $\sim 2.5s$
- Few-Shot: Exact 60%, Within ± 1 100%, JSON validity 100%, Avg latency $\sim 3.1s$
- CoT: Exact 60%, Within ± 1 100%, JSON validity 100%, Avg latency $\sim 4.4s$
- Best approach (speed): Zero-Shot (same accuracy, lowest latency).
- Note: Metrics are indicative; full evaluation constrained by API quota.

3) Task 2: Dashboard System

- Backend: FastAPI; LLM service for user responses, admin summaries, recommended actions; JSON persistence at `task2/data/reviews.json`.
- Frontend: React + Vite; User Dashboard (submit review, get AI response); Admin Dashboard (table, filters, search, analytics charts).
- Data schema: id, timestamp, rating, review, ai_response, ai_summary, recommended_actions.

4) Deployment

- Frontend deployed: review-feedback-system-4yim.vercel.app
- Backend: Render-ready via render.yaml; set GEMINI_API_KEY (and optional GEMINI_MODEL, e.g., models/gemini-1.5-flash).
- Env vars: GEMINI_API_KEY, GEMINI_MODEL, VITE_API_URL (frontend \rightarrow backend).
- Backend start: `uvicorn main:app --host 0.0.0.0 --port $PORT`
- Frontend build/run: `npm install && npm run dev` (or `npm run build` for deploy).

5) Conclusion

- Delivered three prompting strategies with evaluation and visualizations.
- Delivered functional two-dashboard web app with LLM responses, summaries, actions, and analytics.
- Noted evaluation on a reduced sample due to quota; Zero-Shot preferred for speed with matching accuracy in this sample.

Optional run instructions :

- Task 1: `pip install -r task1/requirements.txt`; set GEMINI_API_KEY; run the notebook.
- Task 2 backend: `pip install -r task2/backend/requirements.txt`; `uvicorn main:app --reload`.
- Task 2 frontend: `npm install && npm run dev`; set VITE_API_URL to backend.
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