Proposal: Real-Time Customer Review Monitoring & Routing System

Overview

The food delivery industry thrives on customer experience. Currently, businesses react **after negative reviews accumulate**, leading to **slow resolution, reputational damage, and customer churn**.
We propose an **AI-powered, real-time review monitoring system** that:

- Flags negative reviews instantly.
- Predicts urgency levels (High / Medium / Low).
- Automatically routes issues to the **right department** (Customer Support, Delivery Ops, Restaurant Ops, Tech).
- Provides a **real-time dashboard** for tracking, escalation, and reporting.

Business Impact: Faster resolutions, improved brand trust, higher customer retention, and reduced operational inefficiencies.

Problem Statement

- Customers feel ignored when issues take hours/days to resolve.
- Current workflows are **reactive** and rely on **manual triaging**.
- Lack of urgency classification = minor issues get the same priority as critical ones.
- Poor routing slows down response times, reducing operational efficiency.
- Negative reviews on public platforms quickly harm brand perception.

Solution Approach

We will build a **real-time AI/LLM-based review classification pipeline** that **processes reviews instantly** and ensures **the right issue reaches the right team, with the right urgency level**.

System Workflow

Step 1 – Review Collection

- Reviews ingested from app, website, and 3rd-party platforms.
- Captured in a **streaming queue (Kafka / PubSub)** for real-time processing.
  Why: Ensures zero lag in review intake, enabling real-time monitoring.

Step 2 – Sentiment Analysis

- LLM-based sentiment model identifies review polarity (Positive / Neutral / Negative).

- Only **negative reviews** are passed forward.
  Why: Reduces noise and ensures teams only focus on actionable issues.

Step 3 – Urgency Prediction

- AI classifies urgency into:
  - **High** → Safety, food contamination, refund disputes.
  - **Medium** → Delayed delivery, wrong order.
  - **Low** → App bugs, minor issues.
- Features used: Keywords, sentiment intensity, customer history, metadata (order type, time).
  Why: Prevents "all tickets treated equally" problem, ensuring critical cases get instant attention.

Step 4 – Department Classification

- AI routes issues to:
  - Customer Support → Refunds, complaints.
  - Delivery Ops → Rider behavior, delays.
  - Restaurant Ops → Food quality, packaging.
  - Tech Support → App/payment issues.
    Why: Automates triaging, eliminating delays from manual ticket assignment.

Step 5 – Automated Routing

- Integration with **CRM (Freshdesk, Zendesk, Jira)**.
- System creates an **auto-ticket with urgency + department tag**.
  Why: Fits seamlessly into existing support workflows, no disruption.

Step 6 – Monitoring Dashboard

- Real-time dashboard with:
  - Review trends & volume.
  - SLA tracking.
  - Escalation triggers.
  - Team performance reports.
    Why: Provides **executive visibility** and ensures accountability across teams.

Project Cycle

- **Phase 1: Requirement Gathering & Design** – Review sources, ticketing workflows, urgency criteria.
- **Phase 2: Model Development** – Fine-tune LLM for sentiment, urgency, classification.

- **Phase 3: Integration & Automation** – Connect with CRM, build APIs, deploy streaming pipeline.
- **Phase 4: Dashboard Development** – Build real-time analytics dashboard.
- **Phase 5: Testing & Feedback** – Simulate reviews, test urgency predictions, refine.
- **Phase 6: Production Rollout** – Deploy, monitor, scale.