**📨 Facebook Page Inbox Auto-Reply & UGC Inbox Mining Module**

## Overview

This module is the foundation for conversational AI inside the Facebook Page inbox. It allows brands like Lavishta to:

* Respond to incoming DMs with smart replies using GPT.
* Understand user intent (e.g., order status, product query, skincare help).
* Log useful UGC content (e.g., “I love this toner!”, “Any solution for acne scars?”)
* Tie inbox users to known customers (via previous orders, uploaded customer base, or CRM).

All this operates in one of 3 modes per brand: - ✅ **Manual** – staff reply manually, but system logs UGC and customer match. - 🧠 **Assisted** – AI drafts reply, human approves. - ⚙️ **Auto** – GPT replies automatically, logs everything.

## How It Works

### 1. Webhook Connection to Page Inbox

* Subscribe to messages, message\_deliveries, message\_reads, messaging\_postbacks from Meta.
* Store inbox messages in inbox\_messages table with sender\_id, message, timestamp, matched\_customer\_id, etc.

### 2. Intent Detection Pipeline

* Use OpenAI GPT-4 Turbo with system prompt: > “You are a skincare advisor for a Bangladeshi beauty brand. Classify the intent of this message.”
* Output: intent (product\_query, order\_status, advice, complaint, general)
* Save with each message.

### 3. UGC Mining Engine

* Filter messages with positive tone or product experience.
* Store in ugc\_quotes table with fields:
  + message
  + product\_match (via vector match)
  + sentiment
  + used\_in\_blog: boolean

### 4. GPT Reply Generator

* Pre-fill reply based on intent + customer history:
  + “Hi [Name], thanks for loving our Niacinamide Serum! It works even better when paired with [Product]. Want the full routine?”
* GPT uses:
  + Brand tone settings
  + Product vector database
  + UGC context
* Replies returned with confidence score + editable field.

### 5. CRM Matching Logic

* Match user by:
  + Phone/email collected from message
  + Prior comment records
  + Uploaded customer base
* Update inbox\_customer\_map table with sender\_id, customer\_id, source, match\_score

### 6. Personalization Rules per Brand

* Brands can define via panel:
  + Reply tone: friendly, expert, short, detailed
  + Allowed GPT intents (e.g., auto-reply only for product\_query)
  + Enable/disable logging of sensitive UGC

### 7. Admin Dashboard

* Shows:
  + Inbox threads with filters (intent, tone, match)
  + GPT reply suggestions (approve/send/edit)
  + Stats: avg response time, UGC mined, automation %, match rate

## Technical Stack

* Webhook Server: Node.js or Python FastAPI
* GPT Calls: OpenAI SDK (Turbo)
* Storage: PostgreSQL + Redis queue
* CRM Match: Fuzzy match using email, phone, or full name vector
* Admin Panel: Vue/React + Tailwind

## Permissions / Facebook App Setup

* Platform-level Meta App (not brand-owned)
* Require pages\_messaging, pages\_manage\_metadata, pages\_read\_engagement
* Brand admins approve connection in 1 click from settings panel

## Superadmin Controls

* Enable inbox module per brand
* Set GPT usage limits
* Logs all GPT replies + UGC matches
* Force manual mode for certain tiers

## Use Cases

* Boost UGC collection without extra campaigns
* Faster customer replies (esp. for basic queries)
* Automatically turn inbox messages into blog ideas or testimonials
* Grow understanding of customer needs

Next Module to Document: **Messenger + Instagram + WhatsApp Replies Combined Inbox Feature**?