# 📚 Module 8: AI Blog Refresher + Meta Title Optimizer

## 🎯 Overview

This module automates blog performance optimization by analyzing traffic, freshness, and SEO gaps. It detects outdated or underperforming blogs, refreshes them using GPT, and suggests or updates meta titles/descriptions for improved rankings.

It also integrates with Google Trends to keep content aligned with rising searches and auto-suggests SEO-optimized meta tags for all product/blog pages.

## ✨ Core Features

### 1. Blog Analyzer (Stale Content Detector)

* Connects with GA4 API to fetch:
  + Bounce Rate
  + Avg. Time on Page
  + CTR from source (e.g., Google search)
* Blogs are scored based on performance thresholds.
* Low-performing ones are flagged as stale and queued for refresh.

### 2. Blog Refresher Engine

* Uses blog’s existing content + GPT prompt to rewrite:
  + Headline
  + Intro paragraph
  + CTA section
  + FAQs (optional)
* Ensures:
  + Tone remains brand-specific
  + Content remains factually aligned
  + Internal product links updated

**Prompt Example:**

Rewrite the following blog intro to be more engaging for Bangladeshi readers. Retain key points. Match tone = expert yet friendly.  
[existing blog intro...]

### 3. Google Trends Matcher

* Pulls regional trend data via pytrends
* Matches topics with blog/product categories via vector similarity
* Suggests trending keywords like:
  + “niacinamide during monsoon”
  + “safe actives for teens”
* Adds them into:
  + Blog titles
  + Meta descriptions
  + Headings (if enabled)

### 4. Meta Title & Description Optimizer

* For all blogs and product pages
* GPT suggests optimized meta fields based on:
  + Google Trends
  + Page topic
  + Keyword gaps (via Google Search Console data)
* Optional tone/style toggles:
  + SEO focused
  + Conversational
  + Bangla + English mix

**Prompt Example:**

Generate a 60-character meta title for a blog about "retinol night routine". Add power words, emotion. Mention Bangladesh.

### 5. AI Meta Field Generator for Products

* Runs nightly job to:
  + Detect missing/empty meta fields
  + Regenerate meta fields for low CTR products
* Based on:
  + Product title, concern, benefit
  + Customer UGC (if enabled)
  + Trends

## 🛠️ How to Build

### Stack:

* Language: Python + Node.js
* Vector Search: FAISS
* Embeddings: OpenAI
* Data: GA4, Google Search Console, pytrends
* Queue: Redis

### DB Tables:

* blogs: { id, url, title, ctr, time\_on\_page, score, stale }
* blog\_versions: historical versions pre/post refresh
* meta\_fields: { type: ‘product’ | ‘blog’, id, meta\_title, meta\_desc, gpt\_generated\_at }
* trending\_keywords: [ keyword, volume, matched\_topic ]

### API Endpoints:

* GET /blogs/stale → list blogs to refresh
* POST /blogs/:id/refresh → triggers rewrite
* GET /meta-suggest?type=blog&id=... → returns meta suggestions
* POST /apply-meta/:id → applies meta fields

### Scheduled Tasks:

* Run pytrends every 6 hrs
* Nightly job to scan blogs + products needing refresh

## 🧠 GPT Prompt Templates (for Codex)

* “Rewrite this blog CTA to sound like a personal beauty expert in Bangladesh”
* “Generate 3 SEO meta descriptions for a skincare blog on oily skin in monsoon”
* “Suggest 5 trending Bangla-English blog titles for a blog about vitamin C serums”

## 🔗 Integrations

* Blog Engine
* Product Catalog / PDP
* Google Search Console + GA4 APIs
* AI Product Brain (for internal linking and product tag enrichment)

## 📈 Outcomes

* Higher blog engagement
* Better search rankings
* Auto-updated SEO content
* Discoverability aligned with local trends

✅ This module runs fully automated in “Auto” mode but supports Manual and Assisted workflows from brand panel.

Superadmin can:

* Enable/disable blog refresh & meta optimizations per brand
* Control trend sync frequency
* Review GPT logs for each change