

# Best Use of Generative AI

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## The Telegraph



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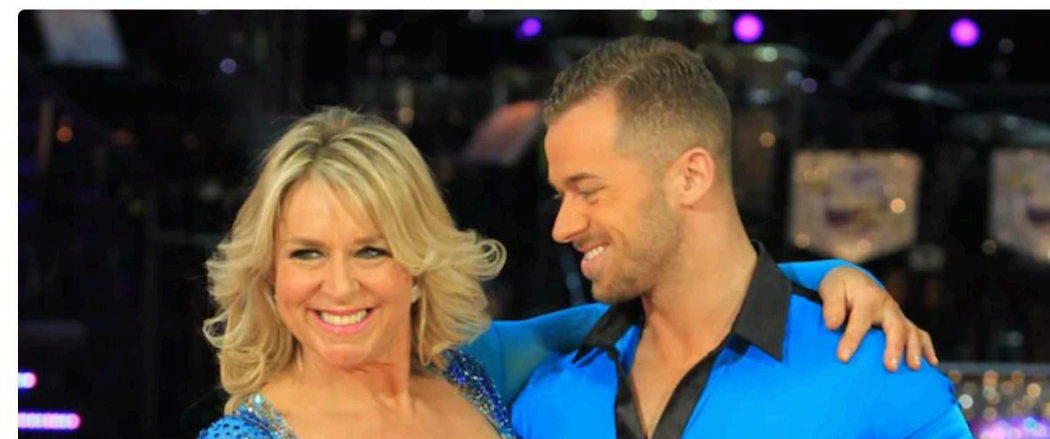
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## About Telegraph Media Group

**Telegraph Media Group** is one of the UK's most respected and established news organisations, known for delivering trusted, high-quality journalism across digital platforms. With a strong editorial heritage and a large, engaged readership, TMG plays a central role in the UK's news landscape.

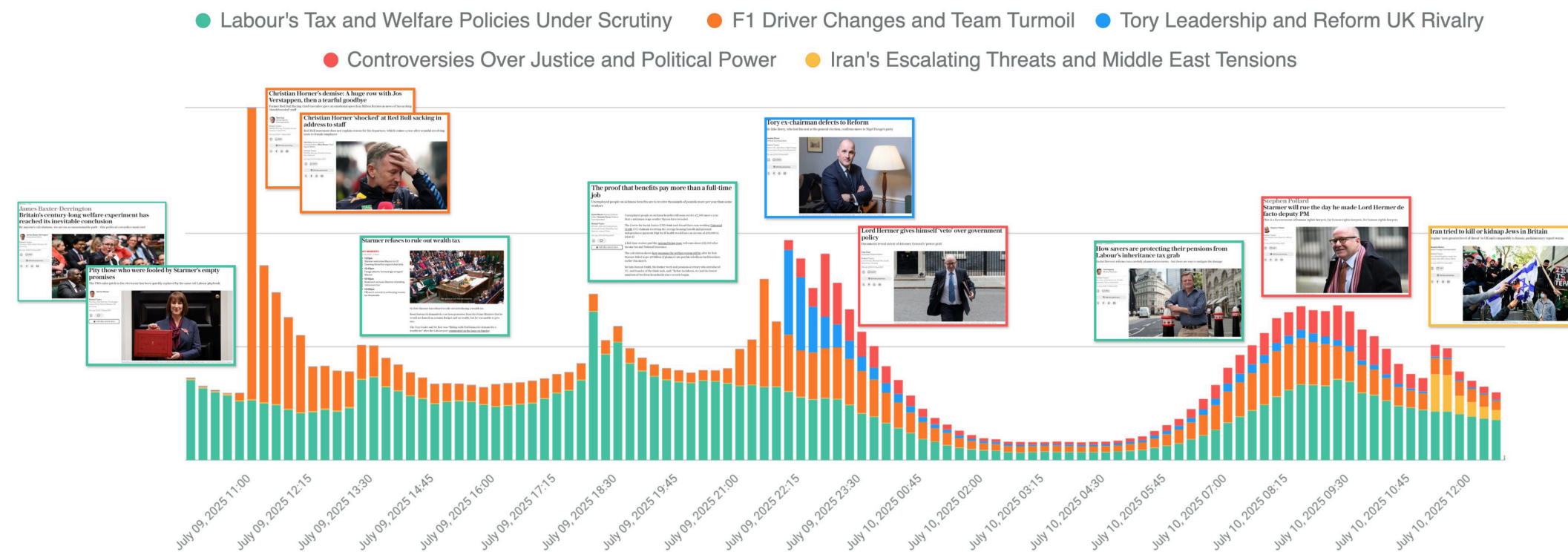
In recent years, TMG has taken a clear digital-first approach, investing heavily in technology, data, and product innovation to better serve modern audiences. The organisation continuously explores new ways to help readers discover relevant journalism, deepen engagement, and build long-term loyalty in an increasingly competitive media environment.

At the same time, TMG places strong emphasis on editorial integrity and control, ensuring that innovation supports journalistic values rather than compromising them. This balance between editorial excellence and technological progress makes Telegraph Media Group a leading example of how traditional publishers can successfully evolve in the digital age.

# General Overview

In partnership with its personalisation provider, **The Telegraph** built a GenAI analytics pipeline that turns fast-moving newsroom data into clear, actionable insight for our Analytics team.

- **LLM embeddings** automatically cluster articles into emerging topic segments
- **Generative AI** names and explains each segment in plain language for editors
- **Updated every 15 minutes**, dashboards surface real-time trends – what’s rising, what’s lasting, and what’s driving high-value engagement

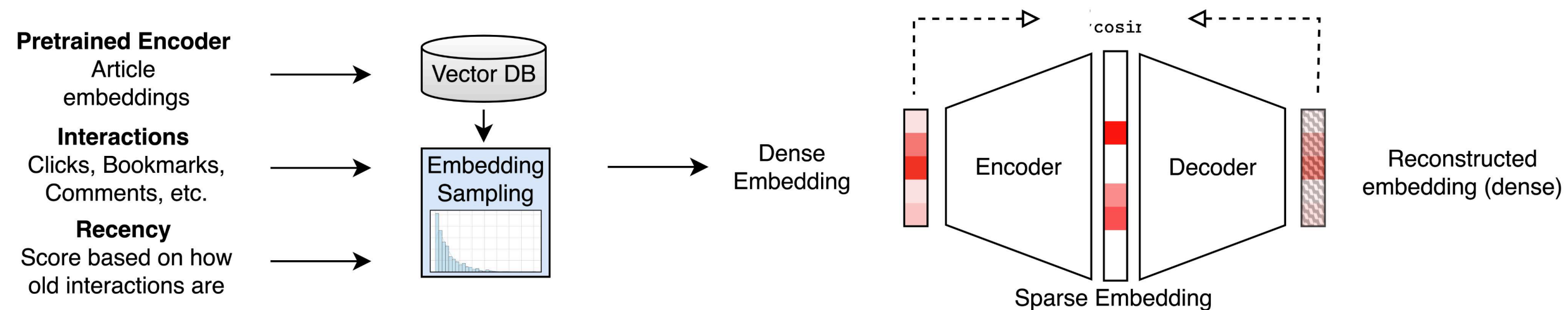


## Campaign Objectives

This initiative used GenAI to turn noisy metrics into editorial intelligence: an automated system that detects emerging themes across The Telegraph's coverage and translates them into clear, human-readable segments.

### How it works:

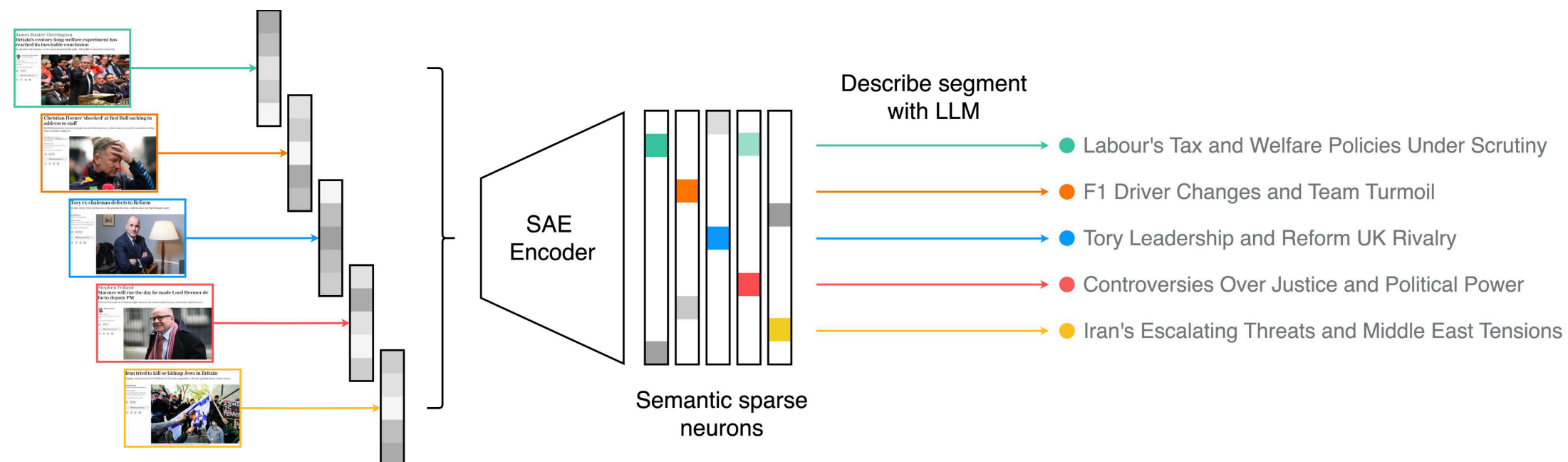
- LLM embeddings from full article text to capture meaning at scale
- Automated clustering into shared themes (via CompresSAE)
- GenAI segment naming to generate concise, interpretable labels



## Campaign Results

This initiative gives **The Telegraph** real-time editorial visibility at the **theme level** – so our analytics team can track how audience interest is shifting across broader narratives, not just individual stories, and see it in **immediately understandable language**.

- **Refreshes every 15 minutes**, helping analysts spot emerging segments early
- Enables faster feedback on **promotion and commissioning**, and separates **short spikes** from **enduring narratives**
- **Segment-level analysis** provides more stable insight than article-by-article metrics
- Dashboards compare **readership, click-through, and conversion** across themes, show time-series patterns, and surface high-performing “hidden” segments worth further coverage
- GenAI makes it usable by **automatically naming segments** with clear labels, no need to interpret clusters or model outputs



## Academic Recognition

A dedicated paper on this entry was written, accepted for publication at the prestigious ACM RecSys Conference, and presented to a live audience in September 2025, attracting significant interest from the research community.



<https://ceur-ws.org/Vol-4056/short1.pdf>

<https://www.recombee.com/img/research-posters/segment-aware-analytics-for-real-time-editorial-support-in-media-groups-lessons-from-the-telegraph.png>

### Segment-Aware Analytics for Real-Time Editorial Support in Media Groups

Lessons from The Telegraph

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#### Abstract

We present a segment-aware analytics pipeline designed to support real-time editorial decision-making in digital media platforms. The core of our method combines large language model (LLM) embeddings with sparse autoencoders to extract interpretable, up-to-date segments from news articles. These segments are continuously refreshed and integrated into the recommendation platform, providing the foundation for analytics dashboards aligned with editorial needs. This demo paper describes our experience deploying the pipeline at *The Telegraph* and illustrates how advanced representation learning can bridge recommendation systems and editorial workflows in fast-paced news environments.

#### Keywords

Editorial Support, Media Groups, Item Segmentation, Sparse Autoencoders

### 1. Introduction

With millions of daily impressions, major digital media groups (like *The Telegraph*) depend on robust analytics to drive editorial decisions, optimize engagement, and power personalized recommendations at scale [1]. A key area of focus is online editorial news support [2, 3], where data-driven insights inform content curation, headline optimization, and article placement to better align with readers' interests and evolving consumption patterns. An important opportunity lies in effectively leveraging behavioral data to identify emerging trends – insights that translate into actionable strategies to boost user engagement while maintaining editorial integrity. This analytical foundation is highly useful for enabling adaptive, timely, and responsive personalization at scale [4].

However, identifying trends in real time presents significant challenges. Detecting temporal dynamics (such as sudden shifts in reader interest or rapidly evolving news segments) requires models that can process and interpret high-velocity data streams with minimal latency [5]. Additionally, making sense of a constantly growing corpus of text demands systems capable of understanding context, disambiguating meaning, and detecting subtle patterns across diverse topics and writing styles [6, 7]. These tasks are further complicated by the need for scalability, where algorithms must deliver accurate, timely insights across vast corpora of articles and impressions without compromising performance or reliability.

To address these challenges and enhance its personalization capabilities, *The Telegraph* is collaborating with *Recombee*, a leading provider of recommender as a service. *Recombee* offers advanced tools for real-time personalization, including support for **segments** – a flexible mechanism for partitioning items into meaningful, possibly overlapping clusters. More formally, segments represent dynamic

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**The Telegraph**



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