# FV News Sentiment Analysis Dashboard

## 1. Overview

The FV News Sentiment Analysis Dashboard is a data-driven application that automatically fetches and analyzes news sentiment for companies listed in the database. It provides an interactive UI to explore sentiment trends, helping businesses and stakeholders gain valuable insights from news sources.

## 2. Key Features

• Automated URL Fetching & Sentiment Analysis

- Fetches news article URLs dynamically via an API call, eliminating manual input.  
 - Scrapes text from each URL, analyzes sentiment using Azure OpenAI, and stores results in AWS RDS PostgreSQL.

• Automated Processing Pipeline

- Dynamically fetches news links for listed companies when triggered.  
 - Performs real-time sentiment analysis.  
 - Designed for future automation and scheduled processing.

• Interactive Data Dashboard

- Built with Streamlit for intuitive visualization of sentiment trends.  
 - Users can filter news data, explore sentiment scores, and analyze historical trends.

• Secure & Scalable Data Storage

- Sentiment data is securely stored in AWS RDS PostgreSQL.  
 - Scales efficiently to handle high volumes of news articles and analytics.

## 3. Flow of Analysis

Process Overview:  
 1. Triggered execution (manual for now, automated scheduling planned).  
 2. Fetches news links dynamically from an API for companies stored in the database.  
 3. Scrapes text from each URL.  
 4. Performs sentiment analysis using Azure OpenAI.  
 5. Stores results securely in AWS RDS PostgreSQL.  
 6. Displays insights on the interactive UI dashboard.

## 4. Technology Stack

• Frontend/UI: Streamlit  
• Backend: Python (Scraping, Sentiment Analysis, API calls)  
• Cloud Services: AWS RDS (PostgreSQL), API-based URL fetching  
• AI Services: Azure OpenAI for Sentiment Analysis  
• Database: AWS RDS PostgreSQL

## 5. Benefits & Impact

• Fast & Scalable

- Processes multiple news sources and stores structured sentiment data efficiently.  
 - Scales to handle high volumes of data and real-time analysis.

• Insightful Decision-Making

- Helps businesses track sentiment trends for companies based on real-time news.  
 - Provides actionable sentiment insights to improve strategic planning and risk assessment.

---  
Next Steps: This is the first draft of the UI; future updates will include automated scheduling, extended analytics, and trend forecasting.  
---