Keeping Abreast of Global FinTech Innovations at World Bank

The World Bank is on a mission to end extreme poverty and boost shared prosperity on a livable planet. The primary way it accomplishes this mission is by providing financing to developing nations, and innovations in financial technology (FinTech) have the potential to impact how this is done substantially. Recognizing the pace of innovation in the FinTech space, the World Bank's Treasury's Financial Technology team and Innovation Office teamed up with Google Cloud and Syntasa to explore how Artificial Intelligence (AI) and Machine Learning (ML) could improve the sourcing and analysis of FinTech news.

BACKGROUND

The field of financial technology is constantly evolving, and it is important to stay up to date to make sound financial and operational decisions. However, the volume and pace of information can be difficult to keep up with. To address this challenge, the World Bank Treasury Financial Technology Unit (TREFT) and the World Bank Group Technology and Innovation Lab (ITSTI) embarked on a project called SmartFi, to explore how new technologies can offer access to trusted, relevant, and filtered news. Working together with Google Cloud and Syntasa, they created a solution to ensure their team remains informed on FinTech. The project was described in further detail in the report titled, Project SmartFi: Exploring AI/ML for FinTech News

CHALLENGES

The World Bank encountered several challenges in keeping up with the developments in FinTech:

Volume of news information: The number of news stories made it difficult to review, synthesize, and summarize them effectively.

Manual sourcing and consolidation: The traditional approach of gathering and compiling information about FinTech was done manually and was very time-consuming.

Accuracy of sentiment models: Existing off-the-shelf sentiment models provided inaccurate and unreliable results.

Multilingual Content: The analysis of content in different languages, especially the Chinese language, brought other difficulties.

Data Security and Privacy: Protecting internal data and content and complying with internal policies for data safety and privacy were important considerations.

Key Points

- The most accurate sentiment model, FinBERT, attained more than 85 percent accuracy in the sentiment analysis of financial text.

- The FinTech experts received more profound insights into the trends and sentiment of the topic.

- Automated pipelines, which collected and analyzed relevant news articles, saved time previously used to source and analyze news manually.

- Improvements in the translation of Chinese content included more diverse content and broadened coverage of the analysis.

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SOLUTION

The collaboration between TREFT, ITSTI, Google, and Syntasa resulted in the creation of SmartFi. Based on Syntasa's Sentiment Analytics solution, it revolutionized the process of sourcing and analyzing FinTech news by leveraging the latest advances in Large Language Models and topic modeling to help:
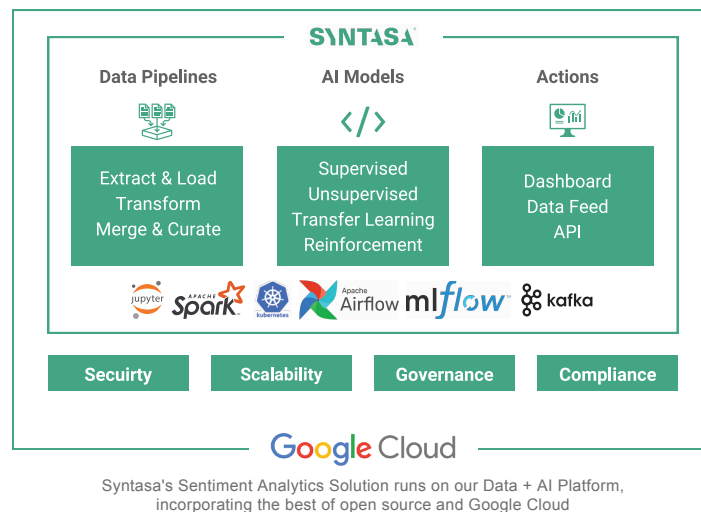
Gained Insights: Fostered a greater and faster understanding of the trends and sentiment towards FinTech. It enhances market analysis and identifies changes in consumer attitudes and behavior.	**Improved Productivity:** The use of automated data pipelines made the process of sourcing news and analyzing it less time-consuming and tiresome. This increased the productivity and effectiveness of the team.	**Enhanced Multilingual Support:** The capability to translate English and Chinese content with a high level of accuracy, extended coverage, and representation of diverse perspectives.

Syntasa's Sentiment Analytics Solution runs on our Data + AI Platform, incorporating the best of open source and Google Cloud

TECHNOLOGY

World Bank's solution harnessed Google Cloud's world-class data analytics technology and other advanced artificial intelligence and machine learning technologies. Many of these technologies are integrated within Syntasa's pre-built Sentiment Analytics solution.

Syntasa and GCP Integration: Syntasa's Data + AI platform was installed and configured with a private Google Cloud Platform (GCP) owned and controlled by the World Bank.	**AI/ML Models:** Custom models were trained and deployed for tasks like topic modeling, sentiment analysis, and translation.	**Interactive Dashboards:** Dashboards in Looker that are extendable to enable real-time data visualization and trends.
Automated Data Pipelines: End-to-end data processing from ingestion to analysis, ensuring up-to-date insights.	**Filters and Customization:** Users can filter data by date, region, topic, sentiment, and source type.	**Google Cloud Data Analytics:** All data was kept within Google Cloud, and analysis was done with the help of BigQuery.
	Topic Modeling: Identified and categorized bottom-up topics in the FinTech space from authoritative sources.	

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LOOKING FORWARD

While the World Bank's SmartFi solution has improved the visibility of FinTech innovations within the organization, it also lays a strong foundation for future growth and improvement. The collaboration between the World Bank, Syntasa, and Google Cloud has demonstrated the potential of AI/ML to enhance news sourcing and analysis for global development.

This partnership exemplifies how bold thinking and cutting-edge technology can make a tangible difference in people's lives.

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Syntasa are digital behavior experts. Our no-code, low-code, pro-code Data + AI Platform orchestrates cloud-native services and leverages the latest advances in AI and machine learning to gain insights from digital behavior and activate those insights autonomously. In our commercial business, we focus primarily on martech and adtech data solutions, including CDP, audiences, and personalized recommendations.