

Case study

emStream helps a large financial services research firm automate information extraction from earnings call reports

Automating extraction of answers for key macro questions from management commentary in earnings call transcriptions

Industry

Financial Services - Research

About the financial services company

A globally leader and subsidiary of a very large global rating agency providing financial services research services to large number of firms including investment banks, hedge funds, endowments

Business Matters

Extraction of answers to critical macros questions from earnings call transcripts in PDFs to help portfolio managers investment decision strategy

Approach

Provide emStream as an Enterprise solution with a custom User Interface to allow ingestion of PDF documents in multi-document mode, defining questions for extraction of answers and a mechanism for verifying the accuracy of answers



Background

A global leader in financial services research and analytics was spending enormous time and resources to tag answers to key macro questions such as Impact of Oil on US Markets and specific sectors, comments about Emerging Market economies, Impact of Currency Movements on Global and Local Markets; from earnings call transcripts which were then being sent to end clients such as Investment Banks, Hedge Funds and Endowments.

This resulted in some key challenges

- ▶ Average time of 2 mins for each question. Time increased as the # of questions increased
- ▶ Uncertainty about accuracy as there was high likelihood that a right answer was missed out
- ▶ Significant cost spent on manpower and training

Business Requirement

The company was looking for a framework that used Machine Learning and Natural Language Processing to auto tag and extract relevant information from PDF documents.

The key capabilities expected were

- ▶ Ability to collect any brand mention across the web and customer conversations from emails
- ▶ Use semantics and natural language processing to auto tag sentiments, intents to appropriate categories for effective trend analysis
- ▶ Engagement on Twitter, Facebook based on conversation workflows using sentiments
- ▶ Map sentiments of customers to their loyalty to get a 360 degree view of customers for preventing customer deflection.

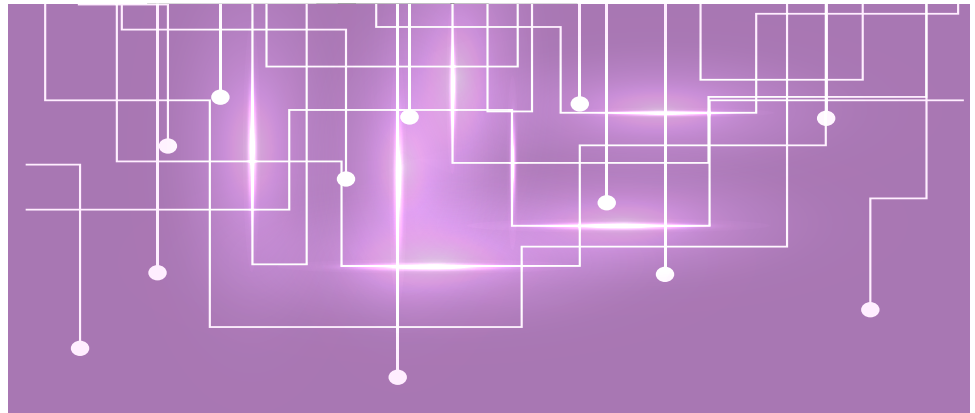
Technology Platforms Used

Languages : JAVA

Visualization: D3.

Machine Learning: R, Natural Language Processing (proprietary)

Social Connectors: Twitter, Facebook, Tumblr, Reddit, Blogs, Boards, Forums, Custom URL's, Emails (IMAP)



Benefits

- ▶ 30% improvement in bottom-line and strong Customer Satisfaction scores as a result of intelligent routing of calls based on sentiments of the customer
- ▶ 3x improvement in Turn Around times as a result of adequate planning and proactive resolution of top issues faced by customers as identified by emStream

Solution

emStream was used to plug into the customer's email and chat systems and scan social media for customer conversations around the brand.

This data was combined with customer profile and transaction data. With this, a 360 degree view of the customer was created to derive customer's life time value, demographics (gender, income group, and social profile), # of emails the customer has sent with sentiments, top service issues faced by the customer.

This intelligence was fed back to the company's CRM systems.

This helped the company route calls and put adequate number of right agents that have the necessary knowledge to handle calls based on customer intelligence and behavior.

The company also sent tailored messages to customers based on sentiments and categories to inform them of their processing status which led to drastic reduction in calls to the contact centre.

The solutions provides following broad feature sets -

Listen:

- ▶ Configure Data Sources including Social and Internal data using keywords and crawlers for custom URL's

Analyze:

- ▶ Derive share of voice, extract sentiments, intents and problems on a real time basis and auto tag them to categories using taxonomies and word clouds.
- ▶ Conduct geo-spatial analytics for location based sentiments
- ▶ Extract critical links from conversations to see competition and other associated mentions of brands, people etc
- ▶ Create 360 degree view of customers using social profile extracted from Facebook, Twitter based on email ID
- ▶ Build and run predictive models on customer data

Engage:

- ▶ Create conversation workflows based on various filters to respond on a real time basis
- ▶ Respond directly on Twitter & Facebook from the product itself
- ▶ Send emails to CRM system for issues that pertain to customer care



About eMudhra

eMudhra is an innovative, consumer-oriented group established to provide path breaking and maverick solutions to transform the financial living of Indian consumers using cutting-edge technologies. It is certainly at the forefront of everything we do at eMudhra, and the culture that is manifested in our employees, processes, and solutions. At eMudhra, we strive to stay relevant in the security and analytics space by optimizing a market-based approach to drive solutions that address our customers needs. Founded in 2008 from the seed of digital signatures, eMudhra has since grown to establish strong roots in secure banking, analytics and consumer solutions.

- ▶ Licensed Certifying Authority under CCA - Govt. of India and Govt. of Mauritius
- ▶ The trusted implementation partner for various Banks, Govt. Depts., Insurance and Telecom Companies.
- ▶ Developed patented applications and holds multiple IPRs in online and mobile space
- ▶ Winner of Innovative Product by Asia PKI consortium and mBillionth South Asia
- ▶ Servicing more than 1 million customer base
- ▶ Only Asian company to be featured in two reports:BI Platforms in Asia and Who's Who of Text Mining
- ▶ emStream has been selected as Nasscom Emerge 50 Startup of the year
- ▶ emStream has been selected as top 5 Startups at CeBit Bangalore, 2014