**NLP application, opportunities and challenging in Fintech**

**Introduction:**

In recent year, Natural Language Processing (NLP) becomes one of the most frequently discussed cutting-edge technology. It is even more popular in FinTech. Therefore, this article discusses some of the key applications, opportunities and challenges related to NLP.

**Applications:**

Sentiment analysis and information extraction are now popular NLP applications in many banks: for analysing sentiment and opinions expressed in text data and for extracting structured information from unstructured text data, such as news articles, social media. Some people may wonder why NLP needs to analyse sentiment data in the FinTech space. The reason is because it may affect the positive and negative correlation of predictions. According to Simon et al(2021), the experimental model for precious metals concludes that market news does not directly help to predict stocks and financial applications but can calculate relative effects to evaluate the risk.

Nowadays, most of the banks have chatbots and virtual customer service on their mobile or online services. These are all applications of NLP technology. NLP supports chatbots and virtual assistants such as Siri and Alexa, enabling them to understand and respond to user queries in natural language. The most useful aspect is the ability to provide 24/7 availability. This is a great solution to the problems of volume and efficiency for the finance industry because they need to deal with enormous amount of request and problem every day. Last, is about text summarisation. There is a huge amount of data in any financial company. NLP can efficiently identify problems and collate accurate and concise summaries. Making it easier for both users and managers to quickly access key information, which can increase efficiency in both analysis and use.

**Opportunities:**

For the NLP opportunity in fintech, customisation and enhanced user experience would be a good direction to take. In the traditional approach, banks may only be able to restrain the service for premium customers, who need to spend extra money or exceed a certain deposit threshold to access the service. With NLP, the bank can reduce the cost of doing this and the cost can be reduced significantly. The customer's perception can also be improved. As for enhancing the experience, NLP can be used to solve various aspects of the customer's problems, and NLP can find the best solutions to the customer's specific needs by searching for relevant case studies.

**Challenges:**

NLP needs to improve its understanding of language, and it is difficult to understand and deal with ambiguities in natural language, which can sometimes be misleading. Scalability is even more of an issue. The need to develop NLP models that can scale effectively to handle large amounts of data and maintain high performance remains a challenge. From Allgue et.,at(2021), The engineers have created the smart budget manager to meet the challenges of our customers and to make continuous improvements. NLP is needed, but it has to be effective in providing a win-win relationship between the bank and its customers.

Ayasdi is a fintech company that has successfully applied NLP and machine learning. The company has built Ayasdi AML. which uses NLP and machine learning technology to help banks and financial institutions detect and prevent money laundering activities. The system can automatically identify suspicious targets and generate alerts. Ayasdi KYC (Know Your Customer): The platform uses NLP to automate the KYC process, streamlining the onboarding of new customers and reducing the risk of non-compliance with regulatory requirements. The solution can extract and analyse relevant information from a variety of sources, including social media, news articles and other public records, to create a comprehensive customer profile.

**Conclusion:**

NLP is a new technology that needs to be considered for its practicality. The real success is to integrate the technology with the company's operational plan. To makethe connection between the system and the customer.

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