## **Twitter Text Analysis for Fintech**

I have considered following approaches to understand people's perspective towards Fintech.

- **Tweet Analysis:** To get the insight of the topic of their discussion.
- ➤ **Location Analysis:** To see which location talking about which Fintech companies the most. Also from which places twitter user are excited about Fintech.
- ➤ **Description Analysis:** I noticed user's description has many words which will help me to understand the top discussion topics about Fintech and which group of people are mainly discussing about Fintech.
- > Stakeholder Group Wise Analysis: I have researched with the Stakeholder's group to see which group of people (e.g.: Academia, Media etc.) are from which location and which companies, topics they are talking about.

At first I have cleaned the data using stop words, punctuations and tokenizer. I have not used stemmer as the root words were not helping much to analyze, after that for each and every tweet, location and description analysis I used the following techniques to get the insight: -

- ➤ Co Occurrence Matrix: Sometimes to get more insight we should check the frequency of two words coming together. At first I have used Bigrams for that but I have not got satisfactory result so I extended my research and designed co-occurrence matrix. I have designed a matrix like com[x][y] which contains the number of times the term x has been seen in the same tweet as the term y. I have discarded the count of com[y][x] In this method, as the count will be redundant then.
- Frequency Distribution: To get the most frequently used single word I have used FreqDist() method from NLTK python package and then most\_common() method to get the top frequent words with the count.
- ➤ Sentiment Analysis: I used sentiment analysis to understand the users perspective towards the subject(Fintech). To get the average contextual polarity I used sentiment function from pattern package of Python. It returns two values. Where first value indicates the negative scoring (varies from -1.0 to 1.0) of the sentence and second value indicated the positive scoring (varies from 0.0 to 1.0) of the sentence.
- ➤ Topic Modelling: I used Non-Negative Matrix Factorization (NMF) and Latent Dirichlet Allocation (LDA) algorithm to get the top topics that Twitter users are talking about. I used parameter tuning to get the ideal number of topics and number of top words to get good result. In the topic modelling, I got the topics with most used words, it is not a well-constructed sentence. Analyzing those keywords, I constructed the topics.

## **Tweet Analysis: -**

Analyzing tweets is the most obvious option to understand people's perspective towards Fintech.

### **Co-Occurrence Matrix Result: -**

Top Words from Tweets by Co Occurence Matrix

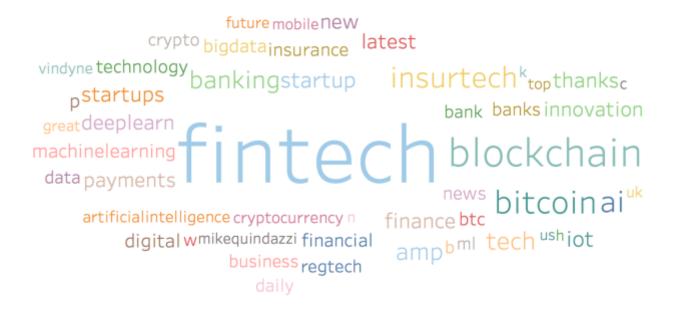
```
b fintech token
token ySfintech partners
fintech tmfintech virtusapolaris
company ys partners ystm ys

substitute medical partners
fintech tmfintech virtusapolaris
company fintech partners virtusapolaris announcement company
announcement partners b company virtusapolaris ys
tm virtusapolaris company e
e fintech
announcement b b token
company token
fintech ys

b e
partners e token financement
company ys partners ystm ys
company ys partners ystm ys
partners token virtusapolaris
company fintech partners
tm virtusapolaris company e
e fintech
announcement b b token
company token
fintech ys
```

- People discussed about Virtusa Polaris, Fintech Lab. So, they also discussed about the improvement of Fintech.
- People discussed about Australian Fintech world and its clash, collaboration with Banks.
- People are concerned about the latest news about Fintech, how integrate new things in it. Such as token's new payment ecosystem that uses end to end secure protocol with digital signature.
- We can see the word announcement has a high frequency, hence tweet users are mostly discussed about new partners, company updates and latest news of Fintech.

Top Words from Tweets



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Big Data etc.
- People also discussed about Vindyne, AMP. Who recently invested in Fintech.
- > Topics like Insurtech, wealthtechbook, lot, Cryptocurrency are also raised.
- Discussed about startups, banking industry, payments.

## **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function of Pattern package, we get following results.

Average Negative Sentiment - 0.10003

**Average Positive Sentiment - 0.22666** 

People are around 10% negative and 23% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

### **Topic Analysis: -**

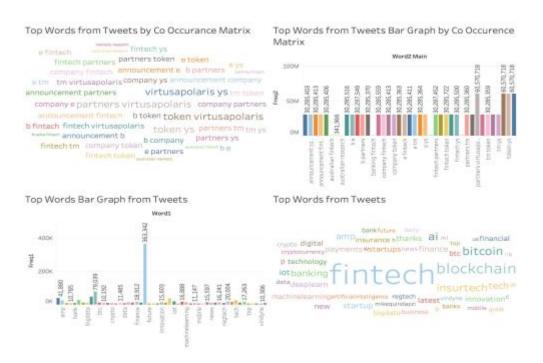
## Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- People discussed positive, negative and neutral aspects of Fintech. Where people are hopeful for Fintech future, with application of Big Data, IOT, Data Analytics.
- People discussed about the role of Regetch in diminishing the cyber security issues.
- Fintech is growing in Singapore with the help of PWC. Innovation under Hood engines are praised and disruption for Fintech using traditional method.
- Indian community's contribution with latest technologies, where bank fails.
- On the contrary Russian Modulbank acquires three Fintech startups. Lastly people discussed about the famous SXSW conference and its impact on Fintech.

## Top 5 Topic using Latent Dirichlet Allocation Algorithm: -

- ➤ People mostly discussed about the growth and development of Fintech. How fars it came using Machine Learning, Artificial Intelligence, Deep Learning and how far it will go using these technologies.
- Latest news and updates like PWC Singapore contribution, IOT updates, positive and negative effects of Brexit.
- ➤ Other top topics are SXSW conference, and its updates on startups competition, panel discussions and mentoring workshops and payment modes other than bitcoin for Asian Fintech World.
- ➤ Regulation Technology is growing in Fintech and Machine Learning applications are applying more rigorously in finance.
- ➤ Banks are still slow compare to Fintech but they are progressing to adopt digital sales capabilities.

## **Synopsis: -**



The Fintech community discussed about the latest technologies and updates of Fintech, where most of them are informative some are positive and very few are negative. People discussed about the risk associated with Fintech, but technologies are improving so as Fintech is also growing. Topics like Brexit, IOT, Bitcoin, Block chain are discussed. Finally, SXSW conference details are discussed and growth of startups, Fintech and Insurtech are discussed.

# **Location Analysis: -**

I analyzed the location to see from which locations people are talking about Fintech.

Top Loations by Co Occurence Matrix



Top Locations



As we can see from the world map most of the people from United States, United Kingdom, Australia, Brazil, Oman are talking about Fintech. According to the location we can say that places where Fintech is emerging people from there are more excited and involved to discuss about Fintech.

## **Description Analysis: -**

I performed description analysis mainly because by going through the data I realized that in Tweet user's description also people used many topics related to Fintech. They added the top trending topics of Fintech in their own descriptions. I can even check that which group of people from the society are mainly talking about Fintech. Hence, I decided to analyze the description feature.

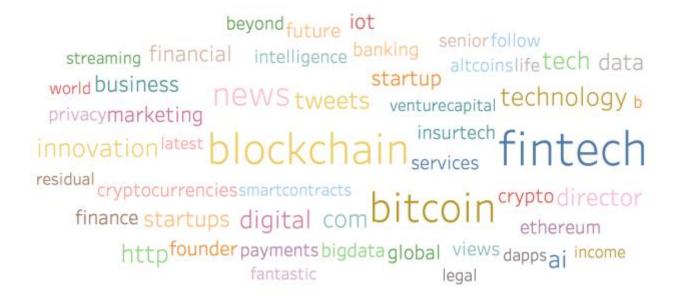
#### **Co-Occurrence Matrix Result: -**

Top Words from Descriptions by Co Occurence Matrix

cyber privacy digital landscape data privacy dparente editor chief innovation economy innovationinnovation landscape digital following bitcoin news cyber director dparente economy dparente landscape dparente following bitcoin ethereum data director following innovation blockchain fintech bitcoin fintech blockchain ethereum blockchain news beyond blockchain bitcoin blockchain blockchain cryptocurrencies director intelligence blockchain startups director gagne bitcoin cryptocurrencies director legal advocate director director privacy dparente innovation ccap director chief following digital innovation data senior digital editor director senior beyond bitcoin economy following economy landscape following landscapedata intelligence digital economy chief editor economy editor chief economy editor following editor innovation chief digital

- Currently most discussed technology Bitcoin using Blockchain Technology is mentioned.
- Mostly people who are enthusiast and positive about future of Fintech are part of this discussion.
- People like Advocate, Chief Editor, Directors are mostly involved in Fintech discussion.

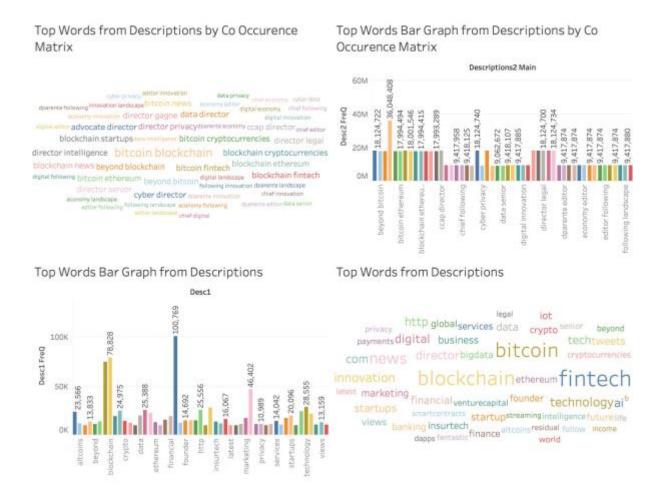
Top Words from Descriptions



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Big Data etc.
- People discussed about AMP, role and Future of Startups, crypto currencies and Insurtech.
- > Topics like Altcoins, payment modes, privacy issues and lot are raised.
- Venture capital firms are also mentioned as tweet users are also people from VC firms.

## **Synopsis: -**



We can conclude that people from all over the world with different background are involved in discussing about Fintech. Many of them are may not be related to Fintech- they are current economy followers, some are related to startups, VC firms and most of the people like Director, Editor from Fintech are involved in the discussion.

## Stakeholder wise Analysis: -

In the stakeholder column, there are 11 groups: -

- Academia
- > Ambiguous
- Business Representative
- Companies
- Corporate Interests Group
- Expert Institutions
- Media
- ➤ Non-Corporate Interests
- Policymakers
- Private Person
- Individual Experts

I analyzed word frequency from twitter, location for each group to understand which group of people are talking about which Fintech companies from which location.

## **Academia Group Analysis: -**

### **Co-Occurrence Matrix Result: -**

bitcoin blockchain
blockchain fintech
digifinancegirl fintech bitcoin fintech
auth quovo institutions quovo expansive quovo
bitcoinmagazine fintech
fintech quovofintech tradingoffers quovo
less quovo api quovo
chinese fintech

- Top company discussed by people is Quovo, AMP and Wealthfront.
- Currently most discussed technology Bitcoin using Blockchain Technology is discussed.
- One of the famous face related to Fintech- Digifinancegirl Shanon Steel is also a part of the discussion.
- People described Quovo with varieties of adjectives- Less, Expansive, Institutions, Authetc.

Top One Word Tweets for Academia Group



From Single word analysis, I can see people mostly discussed about following topics: -

- Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Big Data etc.
- People also discussed about AMP. Which recently invested in Fintech.
- Topics like Insurtech, wealthtechbook lot are also raised.
- Fintech startups is another hot topic for academia people to discuss about.

## **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function for Pattern package we get following results.

**Average Negative Sentiment - 0.1064** 

**Average Positive Sentiment - 0.2327** 

People from Academia group are around 10% negative and 23% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

# **Location Analysis: -**

I used frequency distribution and co-occurrence matrix to analyze the top locations. After Visualization following are the results.





Using both techniques we can see Academic people from Canada, United Sates, Brazil, Argentina, France, United Kingdom, India, Ireland, Malaysia and Singapore are talking about Fintech.

## **Topic Analysis: -**

### Top 5 Topic Analysis using Non-Negative Matrix Factorization Algorithm: -

- Twitter users are praising Wealthtech technology for wealth management and they are thankful to Roboadvisor. Users also mentioned about some discussed fintech personalities in twitter like DenisseFintech. Over all positive sentence praising Wealthtech Technology.
- ➤ Here the twitter users praising the Regtech (Regulatory Compliance Solution) as a positive trending change, mentioned about various fields like Artificial Intelligence, Machine Learning, Neural Network used for this change. Amp used neural network and used in cybersecurity field these transformed the business stock graph. Overall a positive topic. People are mostly praising Fintech.
- A positive sentence people are praising for Quovo and his involvement in Fintech API. It praised females in Fintech world and mentioned about Femtech, awards for Female Achievers in Fintech world.
- Positive topic praised Regetech, save inventors. Good for startup markets in Singapore, Australia.
- This topic has a negative effect. User robertoglezcano expresses fear of rejection and failure. Mentioned about Author Anna Vitals Funders Founders succeeding rejection success steps.

## Top 5 Topic using Latent Dirichlet Allocation Algorithm: -

- Quite similar to NMF result. First topic is positive and it praised Roboadvisors.
- Second topic has a negative impact. It is saying about Mark Carney's speech where he mentioned about issues like anti money laundering (AML), Combating the Financing of Terrorism as Border Public Policy issues.
- ➤ It has a description for Fintech world. Mainly about present states of Fintech and startups.
- Positive impact from Quovo and fintech applications like digital gold, digital currency and cryptocurrency. Over all positive sentence.
- It is a positive sentence companies from Japan, Brazil, UK has positive effect from Fintech.

#### Synopsis: -



In short Academia people are talking about companies like Quovo, AMP, Wealthfront. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. But some negative concerns are also there such as anti-money laundering. Academia people are mainly from Canada, United Sates, Brazil, Argentina, France, United Kingdom, India, Ireland, Malaysia and Singapore.

## **Ambiguous Group Analysis: -**

### Co-Occurrence Matrix Result: -

amp r
digital regtech amp fintech
compliance riskdigital fintech regtech
fintech strategy compliance digital digital r
amp regtech compliance regtech fintech revolution
digital revolution regtech risk compliance fintech
amp compliance fintech rdigital strategy
fintech regtech amp digital
fintech key

- > Top companies discussed by people is AMP, Credit Karma, Thomson Reuters.
- Currently most discussed technologies are Regtech, R, Rdigital.
- Here we can see mainly discussed about Regtech with good objectives like compliance, digital revolution.
- We can see negative word like risk. So we can say with all positive factors there are risk factors too discussed by Ambiguous group.

thanks iot
latestinnovation digital insurtech
startup
banking fintech
deeplearn bitcoinai
amp startups
machinelearning payments tech
financep

From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- ➤ People also discussed about AMP. Which recently invested in Fintech.
- > Topics like Insurtech, IOT are raised.
- Discussed about startups, banking, payments and finance.

#### **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function of Pattern package, we get following results.

Average Negative Sentiment - 0.1509

#### **Average Positive Sentiment - 0.3408**

People from Ambiguous group are around 15% negative and 34% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

## **Location Analysis: -**

I used frequency distribution and co-occurrence matrix to analyze the top locations. After Visualization following are the results.

Top Locations by Co Occurence Matrix for Ambiguous Group





Using both techniques we can see Ambiguous people from Canada, United Sates, Brazil, Australia, France, United Kingdom, Bulgaria and India are talking about Fintech.

## **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Discussed about bitcoin cryptocurrency blockchain, China's growing Fintech Market and hurdle for the startups.
- Second topic is a informative topic where discussed about crowdfunding, blockchain stories and mentioned about investors like Paul Mears.
- Strong positive topic. Praised Fintech and the aspects (machine learning, deep learn) which made it trending.
- Positive sentence praised Fintech investments and discussed about growth for China and Asian Market.
- Praised Insurtech and technologies IOT etc. Mentioned about top people in Insurtech industry like Danielle Guzman.

### Top 5 Topic using Latent Dirichlet Allocation Algorithm: -

- Quite similar to NMF result. This sentence is positive and it praised Roboadvisors, technologies like Bigdata Analytics, IOT.
- Informative topic. Discussed about wealthtech, how helpful it is and info related to it.
- Informative and positive topic about investment. Mentioned top company like Nasadaq and positive changes.
- Positive impact of blockchain wave platform in Fintech world.
- Informative topic, discussed about the current news about Fintech world.

## Synopsis: -

Top Two WordsTweets for Ambiguous Group amp ramp compliance fintech key digital revolution compliance risk gital regtech compliance digital r re tech compliance regtech amp digit intech regtech compliance fintech digital fintech fintech revolution d fintech strategy digital strategy

amp ptech finance innovation iot insurtech startup deeplearn machinelearning startups thanks blockchain

Top One Word Tweets for Ambiguous Group

Top Locations by Co-Occurance Matrix For Ambiguous Group



Top Locations For Ambiguous Group

latest digital



In short Ambiguous people are talking about companies like Credit Karma, Thomson Reuters, AMP. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from ambiguous group also discussed about some recent incidents related to Fintech. Ambiguous people are mainly from Canada, United Sates, Brazil, Australia, France, United Kingdom, Bulgaria and India.

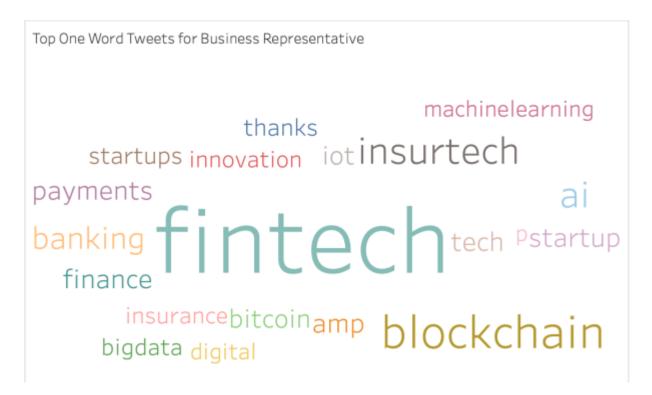
## **Business Representative Group Analysis: -**

#### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Business Representative

hood innovation fintech hood
engines revolution innovation revolution
engines innovation fintech ottlegalrebels
innovation ottlegalrebels fintech innovation
hood ottlegalrebelsengines rev ottlegalrebels techguard
fintech revolutionengines fintech fintech rev
hood revolution rev revolution bit fintech hood rev
engines hood

- Top company discussed by people is AMP, Hood, Techgaurd, Coinbase.
- People from this field strongly positive about fintech. The innovation or revolution combined with other word repeated many times.
- Twitter user Ottlegalrebel has a very high opinion about fintech from Business field and very actively involved with Fintech.



From Single word analysis, I can see people mostly discussed about following topics: -

- Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP. Which recently invested in Fintech.
- > Topics like Insurtech, IOT are raised.
- Discussed about startups, banking, payments and finance.

## Sentiment Analysis: -

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function from Pattern package we get following results.

Average Negative Sentiment - 0.2074 Average Positive Sentiment - 0.3483

People from Business Representative group are around 21% negative and 35% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

## **Location Analysis: -**

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.

Top Locations by Co Occurence Matrix for Business Representatives



Top Locations for Business Representative



Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, Brazil, France, United Kingdom, Australia, Italy and Hong Kong are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Positive topic about Fintech. Discussing about investments and hope for Fintech. By investing in China market London business industry are hoping for positive result.
- > Positive topic praised about Wealthtech Payment system by Twitter users.
- Discussed about the efficiency of payment systems and latest technologies related to it.
- Positive sentence praised Fintech investments and discussed about growth for China, Asian Market.
- Praised Insurtech and technologies IOT etc. Over all it is positive topic.

## **Top 5 Topic using Latent Dirichlet Allocation Algorithm: -**

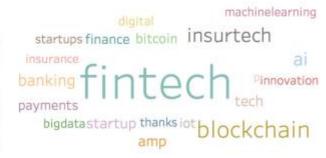
- Positive topic. Hopeful for future, big role for females and praised for Regtech, insurtech and wealthtech.
- Positive topic praising Fintech for his efficiency.
- Informative and positive topic about mode of payments. Discussed the way Fintech is emerging in India.
- Informative topic about Fintech world about fund trading for Wells Fargo and Wall Street etc.
- Informative topic, discussed about the current news about Fintech world.

## Synopsis: -

Top Two Words Tweets for Business Representative

ion revengines revolution engines
hood ottlegalrebels fintech inno
evolutionottlegalrebels techguard
ion innovation ottlegalrebels finte
novation fintech ottlegalrebels fint
evolution innovation revolution bit
oodengines innovation engines fin

Top One Word Tweets for Business Representative



Top Locations by Co Occurance Matrix for Busness Representative



Top Locations for Business Representative



In short Business Representative people are talking about companies like AMP, Hood, Techgaurd, Coinbase. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Business Representative group also discussed about some recent incidents related to Fintech. Business Representative people are mainly from Canada, United Sates, Brazil, France, United Kingdom, Australia, Italy and Hong Kong are talking about Fintech.

## **Companies Group Analysis: -**

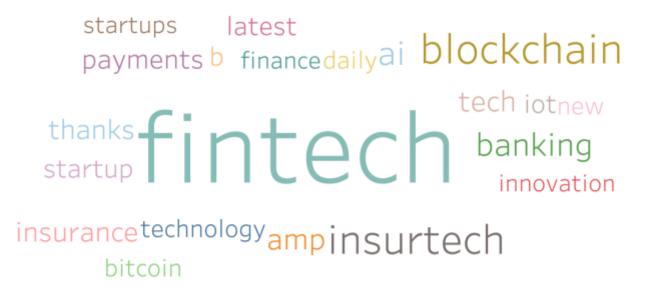
### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Companies

daily fintech
fintech latest card credit
card fintech card daily
citi creditcard citicredit latest citi fintech
cen citiamericanexpress citiciti latest
citi daily daily latest citi select credit daily
credit fintech latest thanks
daily thanks

- > Top company discussed by people is American Express, Citi, AMP, Signifyd.
- People from this field strongly positive about fintech. They are thankful and consider it as a latest revolution.
- People are also talking about CEN (Cornell Entrepreneur Network).

Top One Word Tweets for Companies Group



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP. Which recently invested in Fintech.
- Topics like Insurtech. Insurance are raised.
- Discussed about startups, banking, payments, latest news, daily updates and finance.

## **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function from Pattern package we get following results.

Average Negative Sentiment - 0.1158 Average Positive Sentiment - 0.2353

People from companies group are around 11% negative and 23% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

# **Location Analysis: -**

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.

Top Locations by Co Occurence Matrix for Companies Group



Top Locations for Companies Group



Using both techniques we can see Companies group people talking about Fintech are people from Canada, United Sates, Brazil, France, United Kingdom, Australia, Italy, Spain and India are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Positive topic about Fintech. Discussing about latest technologies used and how it is changing the Fintech world in a positive way.
- Positive topic praised about Cloud Market system by Twitter users.
- > Informative topic. How Fintech use Roboadviser and role Quovo in it.
- Positive sentence praised Fintech investments and discussed about growth for Insurtech.
- Positive and informative topic for Fintech. Fintech joined million followers. Spreading Digital Banking.

### Top 5 Topic using Latent Dirichlet Allocation Algorithm: -

- ➤ Positive topic. Hopeful for future, as London companies invested in Asia. China, Singapore are going cashless.
- This topic is about clashing between Banks and Fintech. There still challenges for money and banks and security payment issues. Overall it is a negative topic.
- Informative and positive topic about Isurtech and its growth.
- ➤ Highly positive. Fintech industries done some exciting research for EU. Many ideas are there to implement and it is highly positive.
- Informative topic, discussed about the current news about Fintech world and the technologies like blockchain, cryptocoin etc.

### Synopsis: -



In short Companies group of people are talking about companies like American Express, Citi, Signifyd and AMP. Most of them are positive and hopeful about Fintech. But there is a negative topic raised about the clashing with Bank, and relation with Sillicon Valley. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Companies group also discussed about some recent incident related to Fintech – like investment of London companies in Asia Market, growth of Insurtech. Companies people are mainly from Canada, United Sates, Brazil, France, United Kingdom, Australia, Italy, Spain and India are talking about Fintech.

### **Corporate Interests Group Analysis: -**

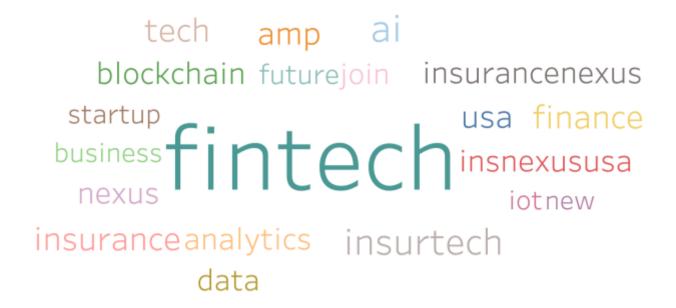
### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Corporate Interests Group

breaking fintech
machine quaerodna ai fintech
deeplearning fintech machine mtdeeplearn deeplearning
fintech north biggest fintechai mt
fintech fintechnorth brands fintech
fintech region deeplearn fintechannounces fintech
fintech plans ai deeplearn ai machine
fintech fsai deeplearning
deeplearn mt

- Top company discussed by people are AMP, Nexus Fintech, Signifyd.
- ➤ People from this field strongly positive about fintech. The innovation or revolution combined with other word repeated many times.
- Corporate Interests Group discussion was bit different than other groups. They are more focused in growing it and developing it.
- Fintech technologies like Artificial Intelligence, Machine Learning also discussed by this group.

Top One Word Tweets for Corporate Interests Group



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP, Nexus, Signifyd.
- Topics like Insurtech, IOT are raised.
- Discussed about startups, banking, payments and finance.
- This group of people are more concerned about growing this industry.

## **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function from Pattern package we get following results.

Average Negative Sentiment - 0.1168 Average Positive Sentiment - 0.2337

People from Corporate Interests group are around 12% negative and 23% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

## **Location Analysis: -**

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.





Using both techniques we can see Corporate Interests Group people talking about Fintech are people from United States, Brazil, France, United Kingdom, Belgium, Germany, Italy, India and Hong Kong are talking about Fintech.

### **Topic Analysis: -**

## Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- ➤ Positive topic about Fintech. How Fintech made life easier for Banking finance and small business groups, by making it cashless.
- Positive topic about Fintech. Users are thanking for mobile payment options and recent growth in Africa.
- > Discussed about the efficiency of payment systems and latest technologies related to it.
- Positive topic praised Fintech investments and discussed about growth for China, Asian Market.
- Informative topic. People discussed about contribution of Nexus recently in Fintech world. How it is trending high using technologies like Big Data.

## Top 5 Topic using Latent Dirichlet Allocation Algorithm: -

Positive topic. Hopeful for future expressed by London Fintech groups. Helpful for small business, tax payments and other facilities became easier.

- Positive and informative topic. Visa, London opens door for innovation in payment system for Fintech.
- Informative and positive topic. Growth of Fintech helping countries like Africa to develop. People discussed about positive changes like Charnawallet, charnacoin.
- Informative and Positive topic about Fintech. This topic is more about Regtech. The way it is growing and helping new and small business to grow.
- Similar to last topic. Praising Regtech and mentioned about Fintech Germany Award Ceremony.

#### Synopsis: -

Top Two Words Tweets for Corporate Interests Top One Word Tweets for Corporate Interests Group Group amtdeeplearn fintech fintech fsai finte nt fintech north brands fintech future join blockchaintech insurtech plearning fintechbiggest fintechaim. startup iotnew intechfintech fintechnorth ai deeple nexus :hine quaerodnaannounces fintecha insuranceanalyticsamp insurancenexus fintech region fintech plans data insnexususa deeplearn deeplearning at deeplearning Top Locations by Co Occurence Matrix for Top Locations for Corporate Interest Group Corporate Interests Group



In short Corporate Interests people are talking about companies like AMP, Nexus, Signifyd. Most of them are positive and hopeful about Fintech. They mainly focused on contribution of Nexus. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Corporate Interests group also discussed about some recent incident, about ceremonies related to Fintech. Corporate

Interests people are mainly from United States, Brazil, France, United Kingdom, Belgium, Germany, Italy, India and Hong Kong are talking about Fintech.

## **Expert Institutions Group Analysis: -**

#### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Expert Institutions

end fintech end mobilemoney dnfmkbfu payments

fintech mobilemoney dnfmkbfu fintechdnfmkbfu end dnfmkbfu mobilemoney dnfmkbfu transactions mobilemoney payments mobilemoney transactions

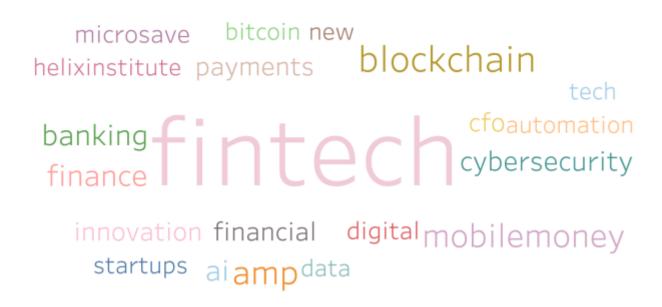
digitalfinance mobilemoney end transactions bangladesh mobilemoney digitalfinance transactions

bangladesh dnfmkbfu bangladesh digitalfinance

digitalfinance fintech fintech payments fintech transactions end payments bangladesh fintech

- More than company they are focused on the technologies used here.
- > They are concerned for Fintech's aspects like mobilemoney, digtalfinance and payment technologies.
- Growth of Fintechs in countries like Bangladesh are most discussed topic in this group.

Top One Word Tweets for Expert Institutions



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP. Which recently invested in Fintech.
- ➤ Here people discussed about Helix Institute of digital Finance.
- > Discussed about startups, banking, payments and finance.
- Here people are more concerned to grow the business in countries like Bangladesh.

## Sentiment Analysis: -

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function from Pattern package we get following results.

Average Negative Sentiment - 0.1008

**Average Positive Sentiment - 0.2376** 

People from Expert Institutions group are around 10% negative and 24% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.





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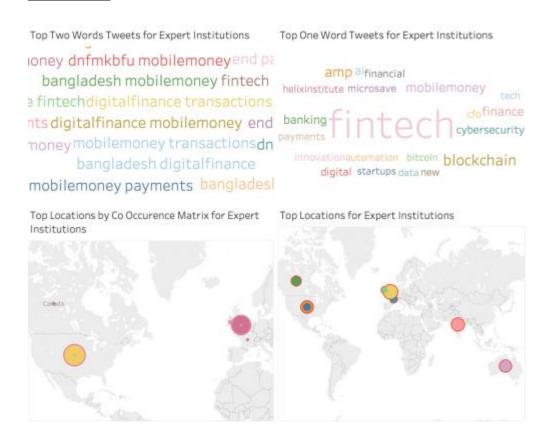
Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, India, France, United Kingdom, Ireland, Australia, Italy and Hong Kong are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Informative topic. It is about the technologies like Bitcoin, Blockchain. It also discussed about Hedge Funds initiation in open code and providing decent growth in Fintech.
- Informative. Regulation techniques recent growth of it are discussed.
- Discussed about the efficiency of payment systems and latest technologies related to it.
- Informative and positive topic. Growth of Fintech in India, Kenya. Different mode of payment like mobile payment, mobile money are discussed. Involvement of China is also discussed.
- Praised technologies like Machine Learning Deep Learn Artificial Intelligence and technologies IOT etc. Over all it is positive topic.

- Informative and little bit negative. Discussed about payment modes, mobile money and the risk like cyber security associated with it.
- Negative Topic. It discussed about the high risk associated with Fintech such as recent rules applied to It by government and startups.
- Informative topic. Discussed about technologies and development by RSRCHXchange.
- Informative topic and positive, Fintech spawns regtech to automate compliance with regulations.
- Informative topic and positive, discussed about the growth and some recent updates of mobile money from Helix Institute in Fintech world.



In short Expert Institutions Group people are talking about companies like AMP, rsrchxchange. They are more focused on the development and growth of Fintech. They are discussed about the spreading and the condition of Fintech in country like Bangladesh, India, Kenya. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Expert Institutions Group also discussed about some recent incident related to Fintech. But they highlighted on some negative aspects also related to Fintech such as, high risk for investments, cyber security issue, mobile payment security issue. Expert Institutions Group people are mainly from Canada, United Sates, India, France, United Kingdom, Ireland, Australia, Italy and Hong Kong are talking about Fintech.

### Media Group Analysis: -

### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Media Group

awards fintech

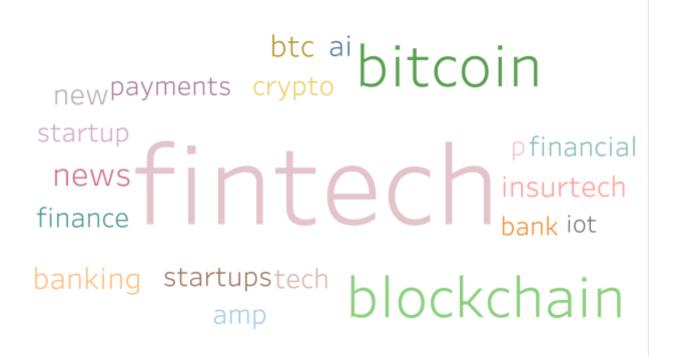
day fintech fintech xanfv amp fintech data fintech blockchain fintech amp news fintech provides fintech uidufinance fintechbrokerages fintech fintech yahoo amp get fintech uqkmokcaadata finance amp technologydenver fintech finance yahoo ceo fintechamp finance

From co-occurrence matrix, I can see people mostly discussed about following topics: -

- Top company discussed by people is AMP, Yahoo. Here although Yahoo is the news provider for Fintech world.
- > Discussed about effect of NVF and Network Virtualization.
- Latest news about Denver Fintech, about its investments and startup are discussed.
- Discussed about the finance part of the Fintech.

### **Single Word Frequency Result: -**

Top One Word Tweets for Media Group



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP. Which recently invested in Fintech.
- > Topics Insurtech, IOT are raised.
- Discussed about startups, banking, payments and finance.

## **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function of Pattern package, we get following results.

**Average Negative Sentiment - 0.0666** 

**Average Positive Sentiment - 0.1862** 

People from Media Interests group are around 6% negative and 19% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.



Top Locations for Media Group



Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, France, United Kingdom, and Australia are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Positive and Informative topic. People are discussing about the growth of Fintech in Asia- New Bank, startups.
- Positive topic praised about new technology like regulation Technique.
- Discussed about the efficiency of payment systems and latest technologies related to it.
- Informative topic. Discussed about all the technologies and latest news related to Fintech. Such as Innovation with Big Data in Cyber Security. Growing trends in Singapore with PWC and IBM's Enterprise Fintech Connect in India with gathering of Fintech startups.
- Informative topic about all the technologies related to Fintech like market place peer to peer lending.

- As it is a media group most of the topics are informative and positive. People are London Fintech companies' role in China or latest technology related to Fintech world.
- Media group also discussed the Brexit's positive and negative effect on Fintech.
- > Improvement of payment systems using recent technologies discussed.
- Robo advisor technology praised and praised to be number one for all the time.
- > American Fintech world's growth and achievement is also discussed.



In short Media people are talking about companies like AMP mainly. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Media group mainly discussed about some recent incident related to Fintech. Media people are mostly located in Canada, United Sates, France, United Kingdom, and Australia Canada, United Sates, France, United Kingdom, and Australia are talking about Fintech.

### Non-Corporate Interests Group Analysis: -

### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Non Corporate Interests Group

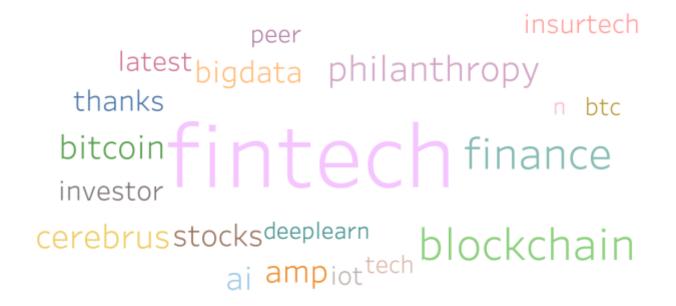
samsung uvcx
samsung yiedc cloakcoin fintech altcoin cloakcoin
bitcoin blockchain mobilewallet samsung
blockchain fintech mobilemoney samsung
financialxpress samsung fintech samsung
bitcoin fintech bitcoin cryptocurrency
launch samsung samsung soon bitcoin btc
india samsung bitcoin crypto
pay samsung

From co-occurrence matrix, I can see people mostly discussed about following topics: -

- Top company discussed by people mainly Samsung.
- People are mainly discussed about Bitcoin, blockchain and other crypto currencies like alt coin, cloak coin.
- People in this group are discussed about role of Samsung in India and Fintech World.
- This group is mainly focusing about the payment mode like mobile wallet, mobile money

### **Single Word Frequency Result: -**

Top One Word Tweets for Non Corporate Interests Group



From Single word analysis, I can see people mostly discussed about following topics: -

- ➤ Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP. Which recently invested in Fintech.
- > Topics like Insurtech, IOT are raised.
- > Discussed about startups, banking, payments, stocks and finance.

### **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function of Pattern package, we get following results.

**Average Negative Sentiment - 0.1185** 

**Average Positive Sentiment - 0.2609** 

People from Non-Corporate Interests group are around 12% negative and 26% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.



Top Locations for Non Corporate Interests Group



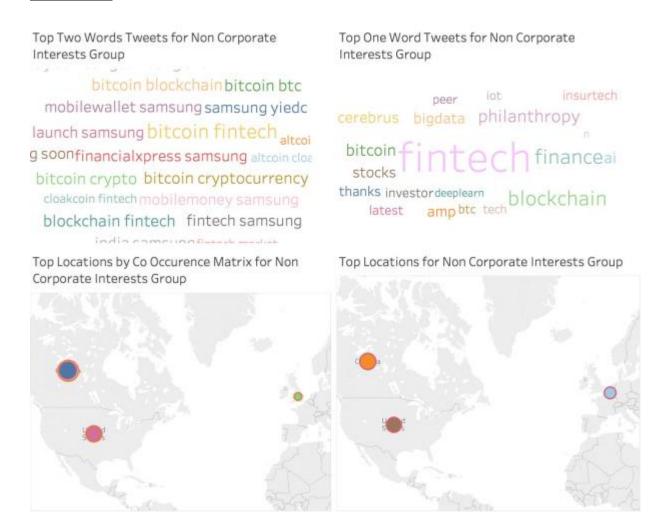
Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, United Kingdom, and Belgium are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- ➤ The top topic discussed about positive and negative effect. While due to Fintech job opportunities will increase again tax will be raised. Negative impact in Banks are also discussed.
- > Negative topic discussed. Using latest technology while there is growth then again for free people it is a real issue.
- Negative topic discussed. While latest innovations are good but for many customers for startups and Banks it created disruption.
- Informative and positive about Fintech World.
- Informative topic about latest updates about Fintech.

- ➤ Informative and positive about Bank-Fintech partnership.
- Positive topic praising Fintech and potential big market after Trump won the president ship.
- ➤ Informative about payment mode of Fintech. Discussed about alt coin alternate option from Bitcoin, clockcoin.
- Informative topic about Fintech world women power and initiation to change the fintech positively by women.
- Informative topic, and positive Quovo's step towards the growth of Fintech world which impact I a positive way in the world economy.



In short Non-Corporate Interest people are talking about companies like Samsung. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Non-Corporate Interest group also discussed about some recent incident related to Fintech. Non-Corporate Interest people are mainly from Canada, United Sates, United Kingdom, and Belgium are talking about Fintech.

### Policymakers Group Analysis: -

### **Co-Occurrence Matrix Result: -**

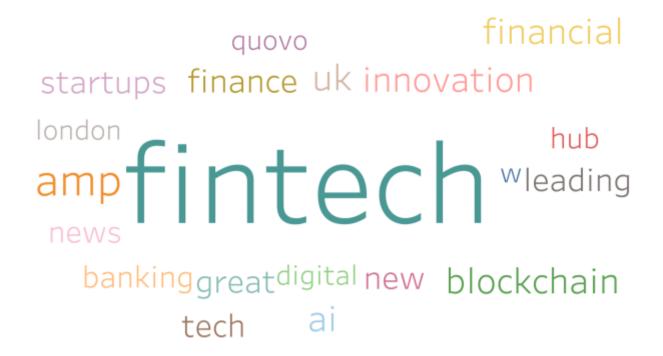
Top Two Words Tweets for Policymakers Group

czech ripeanother great
fintech opportunities
another strengthened market ukczech strengthened
coope czechczech opportunities czech fintech
ukzczech great another czech fintech uk
area czech opportunities ukarea fintech great uk
fintech market fintech great

From co-occurrence matrix, I can see people mostly discussed about followings: This group is mainly topic about impact growth of Fintech World in United Kingdom
(UK). Czech initiative by Delloitte was became the part of discussion. It discussed about
opportunities, growth area and how strengthened the Fintech in United Kingdom.
Policymakers group people are talking about companies like AMP, Quovo, Alphasense,
Ripple.

## **Single Word Frequency Result: -**

Top One Word Tweets for Policymakers Group



From Single word analysis, I can see people mostly discussed about following topics: -

- Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP. Which recently invested in Fintech.
- Topics like Insurtech, IOT are raised.
- Discussed about startups, banking, payments and finance.
- Companies like Quovo, AMP's contribution are discussed.

## Sentiment Analysis: -

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function from Pattern package we get following results.

## Average Negative Sentiment - 0.1601

#### **Average Positive Sentiment - 0.2815**

People from Policymakers group are around 16% negative and 28% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.

Top Locations by Co Occurence Matrix for Policymakers Group



Top Locations for Policymakers Group

Russia

China

Lina

Attraction

Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, Brazil, France, United Kingdom, Australia, Malaysia, Singapore and Germany are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Positive topic about Fintech UK. Fintech's growth and latest update. Mainly discussed about Fintech world of UK.
- Positive topic praised latest technologies, it's applications for wealth management and Robo investor by Twitter users.
- Positive and informative topic about the growth of the Fintech and its growth in Singapore.
- Positive topic praised Fintech investments and discussed about growth for China and Asian Market.
- Negative topic discussed for cloud money science about the risk and management of this issue. Lombard Risk Management hired for the risk management issues.

- Informative topic. Effects on Fintech due to many leading circumstances like Brexit, annual effect of it on Billion startups etc.
- > Informative and partially positive with some questions about the future of the Fintech. Discussed about technologies investors and how it will improve.
- Informative and positive topic about the growth of Fintech.
- Informative and positive topic about Fintech world about Mayor of London agreed with the open banking report.
- Informative topic, discussed about the current news about Fintech world. Most of them are positive with the brief discussion about the role of AI, block chain, deep learn tech banking artificial intelligence machine learning.





In short Policymakers group people are talking about companies like AMP, Quovo, Alphasense, Ripple. They mainly discussed about the Fintech UK current condition. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Policymakers group also discussed about some recent incident related to Fintech. So, some negative concerns also raised like risk management issue with cloud money science and future risk for Fintech. Policymakers people are mainly from Canada, United Sates, Brazil, France, United Kingdom, Australia, Malaysia, Singapore and Germany are talking about Fintech.

### **Private Person Group Analysis: -**

### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Private Person Group

finance globalization
finance globalization
globalization prestigeecon fintech prestigeecon
panelist sxsw finance prestigeecon economy sxsw
excited sxsw globalization sxsw prestigeecon sxsw
markets sxsw finance fintech moneyatsx sxsw
fintech sxsw excited prestigeecon finance sxsw
excited globalization fintech markets excited fintech

From co-occurrence matrix, I can see people mostly discussed about following topics: -

- Top company discussed by people is AMP, Quovo and Vindyne.
- ➤ People from this field strongly positive about fintech. The term globalization used many times by private person group.
- Private person group is concerned more about globalizing the Fintech. f
- People here are discussed lot about SXSW conference where they host a startup competition, panel discussions, and mentoring workshops for entrepreneurs

### **Single Word Frequency Result: -**

Top One Word Tweets for Private Person Group



From Single word analysis, I can see people mostly discussed about following topics: -

- > Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP, Quovo and Vindyne.
- > Topics like Insurtech, IOT are raised.

### **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment function of Pattern package, we get following results.

**Average Negative Sentiment - 0.0988** 

**Average Positive Sentiment - 0.2308** 

People from Private Person group are around 10% negative and 23% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.

Top Locations by Co Occurence Matrix for Private Person Group



Top Locations for Private Person Group



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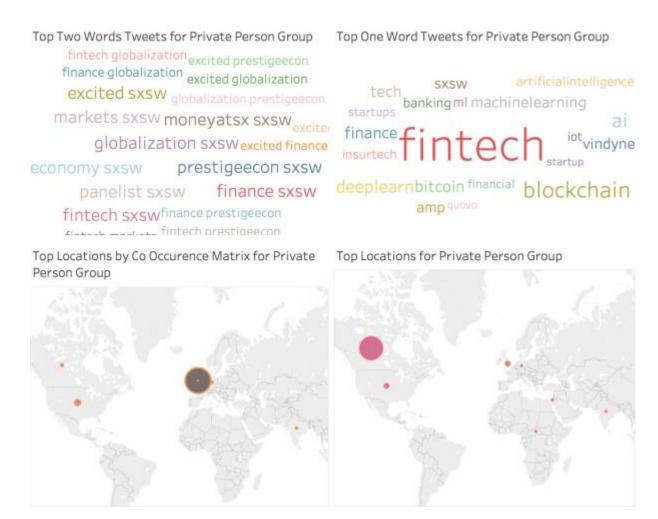
Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, United Kingdom, Germany, Muscat and Central Region are talking about Fintech.

### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Positive and Informative topic about Fintech. Discussing about investments and hope for Fintech. Discussed about effect on Asian market.
- Informative topic, discussed about technologies and role of Data scientist in Fintech.
- Informative about the role of Vindyne on Fintech.
- Positive topic, discussed about all the technologies and positive possibilities about Fintech.
- > Praised Fintech and technologies deep learn, mobile payments artificial intelligence etc. Over all it is positive topic.

- ➤ Positive topic. Hopeful for future, big role for females and praised for Fintech. Informative about the conferences in places like India and thus growing it all over the world.
- ➤ Positive topic praising Fintech and its affiliated field Insurtech. Mentioned about technologies related to it.
- Informative topic, updates about Fintech world related to altcoin, Visa London's initiative.
- Informative topic about Fintech world about fund trading and other payment terms like cloak coin, network platform etc.
- Informative topic, discussed about the current news about Fintech world. Which has a positive side, innovation for AMP end for Cryptocurrency.



In short Business Representative people are talking about companies like AMP, Quovo, Cross River Bank, Alphasense and Vindyne. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Business Representative group also discussed about some recent incident related to Fintech. Business Representative people are mainly from Canada, United Sates, United Kingdom, Germany, Muscat and Central. Region are talking about Fintech.

### **Individual Expert Group Analysis: -**

### **Co-Occurrence Matrix Result: -**

Top Two Words Tweets for Individual Experts

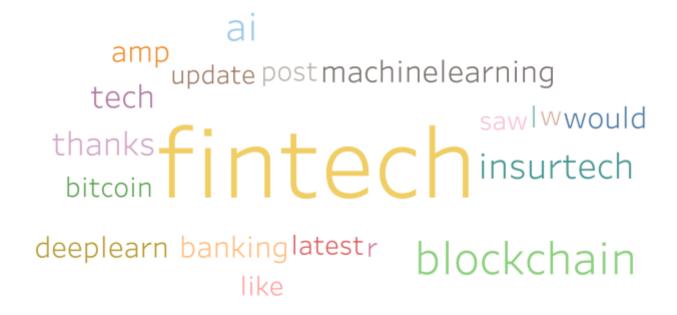
code data blockchain fintech
data fintech data techai machinelearning
fintech thanks fintech post ai fintech
back data fintech technology data technology
content fintechfintech found concerning fintech
data hiddendata door bigdata data
fintech hi ai deeplearn

From co-occurrence matrix, I can see people mostly discussed about following topics: -

- ➤ People are mainly discussed about the technologies used for Fintech like Bigdata, Machine Learning and Artificial Intelligence.
- ➤ People from this field strongly positive about fintech. Discussed about hidden data and technology used to get those data.
- People here are discussed lot about AMP.

### **Single Word Frequency Result: -**

Top One Word Tweets for Individual Experts



From Single word analysis, I can see people mostly discussed about following topics: -

- Technologies related to Fintech. Bitcoin which use the Blockchain method is an application of Artificial Intelligence, Machine Learning, Deep Learning etc.
- People also discussed about AMP, Credit Karma, Fundrise, Ripple.
- Topics like Insurtech- blessings for insurance industry is raised.

### **Sentiment Analysis: -**

From all the tweets, we can conclude how much positive, negative or neutral people are thinking about Fintech. Using Sentiment functions from Pattern package we get following results.

Average Negative Sentiment - 0.1251 Average Positive Sentiment - 0.2251

People from Individual Experts group are around 13% negative and 23% positive about Fintech. Rest part of the tweets are mostly informative where people discussed about the latest updates and news about Fintech world.

I used frequency distribution and co-occurrence matrix to analyze the locations. After Visualization following are the results.



Top Locations for Individual Experts



Using both techniques we can see Business Representative people talking about Fintech are people from Canada, United Sates, United Kingdom, Chine, India and Korea are talking about Fintech.

#### **Topic Analysis: -**

### Top 5 Topic using Non-Negative Matrix Factorization Algorithm: -

- Positive and Informative topic about Fintech. Many new retail banks are foregoing brickand-mortar branches and standard ATM networks in favor of services delivered exclusively online and through apps.
- Informative and positive topic, discussed about technologies and role of Data scientist tool in Fintech for its rapid growth.
- Informative and Positive topic, praising wealth management technique, Robo advisor for the growth.
- Positive and Informative topic, Accelerators and incubators set up by legacy players and their tech partners are encouraging this growth, as these programs place fintech companies on the cutting edge of business ideas, along with a first-mover advantage if they want to invest in or acquire startups
- Praised Fintech and technologies deep learn, artificial intelligence etc. Over all it is positive topic. Growth of Insurtech using these technologies.

- Positive topic. Insurtechs have started to prosper because the insurance industry has not been in too much of a rush to modernize when compared to the rest of the financial services industry.
- Positive topic praising Fintech and its affiliated field Insurtech. Disruptive insurtech are growing fast as they have the power to shift from traditional players.
- ➤ Informative and positive topic, Bitcoin and other cryptocurrencies, is gaining steam among finance firms because of its potential to streamline processes and increase efficiency.
- Informative topic about Fintech world about fund trading and marketing financial services. People also discussed the effect of Trump government on the Fintech.
- Informative and positive topic, Fintech growth accelerates in Asia with huge amount of investments.

Top Two Words Tweets for Individual Experts

ai deepleamblockchain fintech
ai machinelearning data door
fintech found data technology
fintech thanks concerning fintech
ai fintechfintech technology code data
content fintech
data fintech
back databigdata data
data hidden deeplearn fintech data tech

Top One Word Tweets for Individual Experts



Top Locations by Co Occurence Matrix for Individual Experts

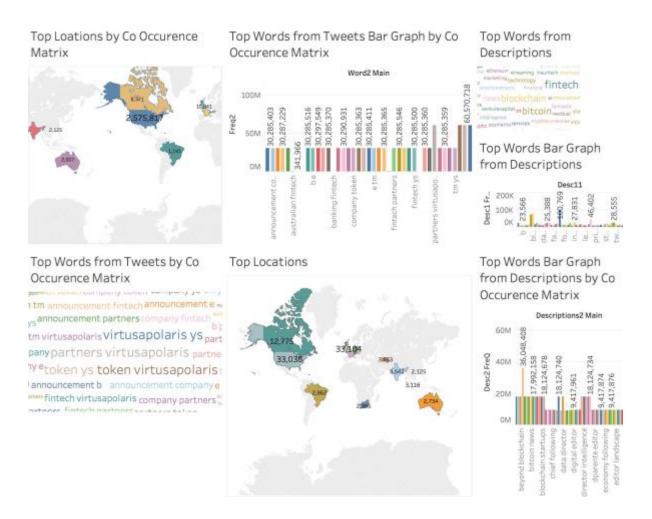


Top Locations for Individual Experts



In short Individual Experts people are talking about companies like Billgaurd, AMP, RobinHood and Wealthfront,. Tis group are mainly concerned with Insurtech. The recent updates of Insurtech and positivity of it in Fintech world are top most topic of discussion. Most of them are positive and hopeful about Fintech. They discussed about topics like Artificial Intelligence, Machine Learning or Neural Network which is strongly related to Fintech. People from Individual Experts group also discussed about some recent incident related to Fintech. Individual Experts people are mainly from Canada, United Sates, United Kingdom, Chine, India and Korea are talking about Fintech.

### **Conclusion: -**



After analyzing all the data, I can conclude following points about Fintech.

- People discussed about the Brexit effect on Fintech. Which has a positive effect as bank will slow down for few days and it needs time pace up with the current economy.
- Fintech uses technology like crowd funding which can be used directly to avoid balance sheets and very advantageous compare to banks.
- Fintech is growing and getting additional momentum throughout Europe.
- Trump discussed about new modern regulatory framework to grow the economy so it has a positive effect in Fintech.
- In future, we expect to see USA fintech investment slowing down. There is a lot of economic uncertainty that is sweeping across the country.
- People discussed about the clash with banks.
- New updates like token's new payment ecosystem that uses end to end secure protocol with digital signature are discussed.

- China and Hong Kong doubled Fintech investment in 2016, passing US for the first time.
- Regtech- Turning regulatory compliance into a competitive advantage.
- Spreading of Fintech to many locations. Their developments in country like India, Bangladesh, Kenya.
- ➤ Role of Singapore PWC, IBM, Samsung in Fintech World.
- Discussed about recent Czech banking market and benefits of it.
- People discussed about some negative side also. Still it is not compatible with different regulatory environments. For example, Bitcoin is not acceptable in many countries.
- ➤ UK revolution diverging from remaining EU countries is a challenge for any Fintech company trying to expand.
- Fintech companies are somehow effected by the slow economy.
- The VirtusaPolaris Fintech Lab is set up to help the incumbent banks to accelerate their innovation process and stand strong against the disruptive wave.
- ➤ Role of Machine Learning, Artificial Intelligence, Deep Learning for developing and growing Fintech.

Over all according to the sentiment analysis around 25% people are positive where around 12% people are negative about Fintech. Rest of the discussions are informative we can say people are neutral for those points.

People are talking about companies like RobinHood, Wealthfront, Billgaurd, Commonbond, Adyen, Quovo, Amp, Cross River Bank, Alphasense, Betterment, Coinbase, Credit Karma, Fundrise, Ripple, Signifyd to name a few.

People mainly from United States, Brazil, Argentine, United Kingdom, Spain, France, Italy, Ireland, Denmark, Oman, Indian, Singapore, Malaysia, South Korea and Hong Kong are talking about Fintech.