BTL Học phần IT5384
Lưu trữ và xử lý dữ liệu lớn

Lớp: CLC HTTT K64

Nhóm 2:

Bùi Tùng Anh
Nguyễn Duy Cương
Nguyễn Trần Hiếu Giang

Problem 1: Evaluate users by Geographical area

MỤC TIÊU BÀI TOÁN

1

Phân loại người dùng theo khu vực địa lý

2

Nhận dạng người dùng liên quan tới web3

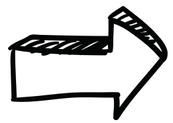
3

Phân loại người dùng theo dự án quan tâm

THỰC HIỆN

Data Crawling

Data Processing



Data Analyzing

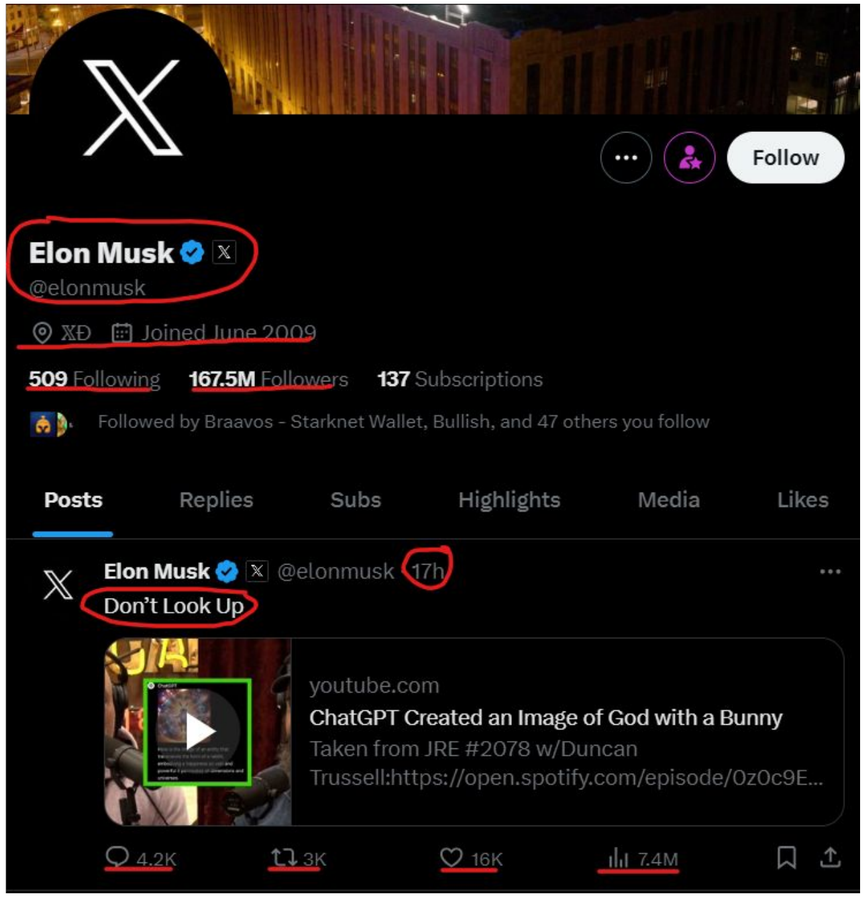
I, Thu thập Dữ liệu

Dữ liệu project của Centic → **Project và Followers tương ứng** → **Thu thập dữ liệu của Followers**

Nhận dạng và Phân loại người dùng theo Web3 project

Crawling

- bs4
- selenium
- snscrape
- twscrape



Dữ liệu thông tin người dùng từ X Profile gồm có:


```
"id": 1478269476076351488,
"username": "VioletAbtahi",
"displayName": "Violet Abtahi",
"url": "https://twitter.com/VioletAbtahi",
"intro": "COO @enyaai | Co-founder @bobanetwork
"join_date": "2022-01-04T07:38:16+00:00",
"location": "San Francisco, CA",
"friends_count": 1529,
"favorite_count": 277,
"followers_count": 1531,
"media_count": 9,
"status_count": 190,
"listed_count": 29,
"is_protected": null,
"is_verified": false,
```


Profile


```
"user": "VioletAbtahi",
"tweet_id": 1585967548553564160,
"tweet_content": "love japan web 30 community",
"tweet_created_at": "2022-10-28T12:11:44+00:00",
"like_count": 8,
"retweet_count": 3,
"comment_count": 2,
"view_count": null,
"quote_count": 0,
"hashtags": [],
"place": {
    "id": "a56612250c754f23",
    "fullName": "Tokyo-to, Japan",
    "name": "Tokyo-to",
    "type": "admin",
    "country": "Japan",
    "countryCode": "JP"
},
"mentioned_users": [],
"long-lat": [
    -83.54424285888672,
    26.01139259338379
]
```


Tweets

II, Xử lý dữ liệu

Bot check

- Classification
- Kaggel Labeled Data

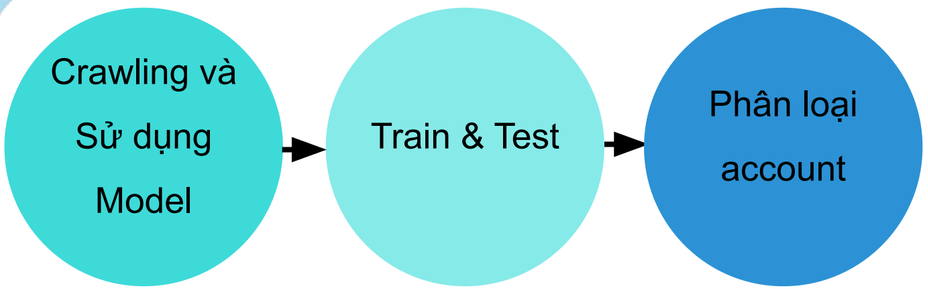
Text processing

- Tokenize, lemmatizer NLTK
- Remove emoji, stopword, special character,…

Name	Description	type
id	Twitter ID for user account	integer
account_type	indicator of the account type (bot or human)	string

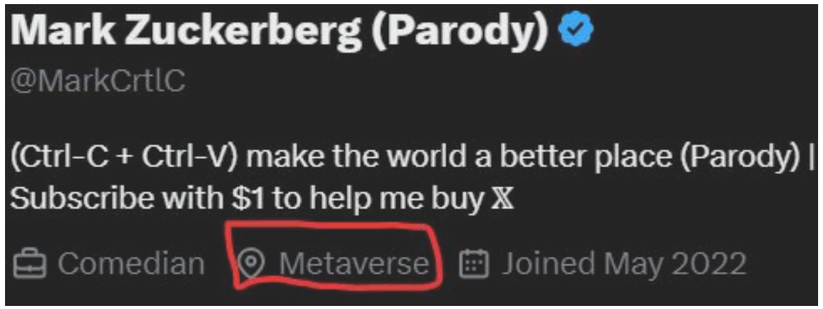
Model Card for Model Geo-BERT-multilingual

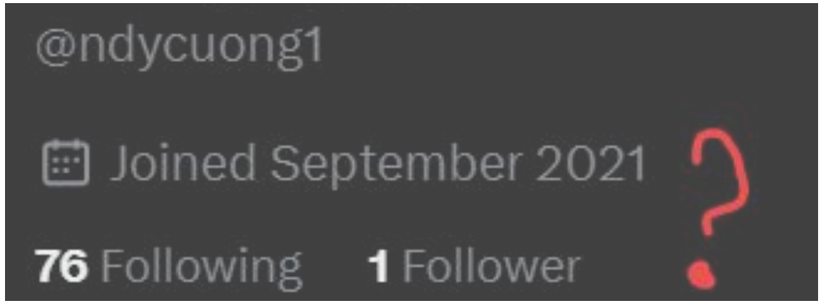
This model predicts the geolocation of short texts (less than 500 words)



III, Phân tích dữ liệu

Dự đoán vị trí người dùng





- Mô hình dự đoán vị trí dựa trên text và metadata
- Sử dụng trên nội dung tweets với user chưa có thông tin sau stage 1

User home geolocation prediction task

- TEXT-ONLY: mean 892 km and median 31 km, 74% of Acc@161
- NON-GEO: mean 567 km and median 26 km, 82% of Acc@161

Stage 2

Geo-BERT

Stage 1

API Decoding

Nominatim

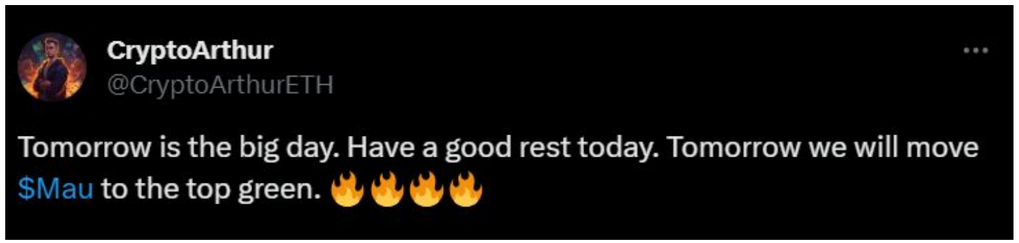
- Lấy thông tin khu vực địa lý từ thông tin trong trường location
- Trả về NULL với không phải dữ liệu vị trí, hoặc trường trống,

III, Phân tích dữ liệu

Tweet Sentiment Analysis

twitter-XLM-roBERTa-base for Sentiment Analysis

This is a multilingual XLM-roBERTa-base model trained on ~198M tweets and finetuned for sentiment analysis. The sentiment fine-tuning was done on 8 languages (Ar, En, Fr, De, Hi, It, Sp, Pt) but it can be used for more languages (see paper for details).

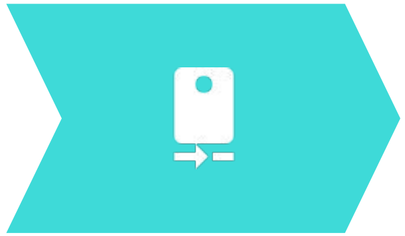



```
[{'label': 'positive', 'score': 0.7345331311225891}]
```

PROCESS

Google stored Data

Spark clean data

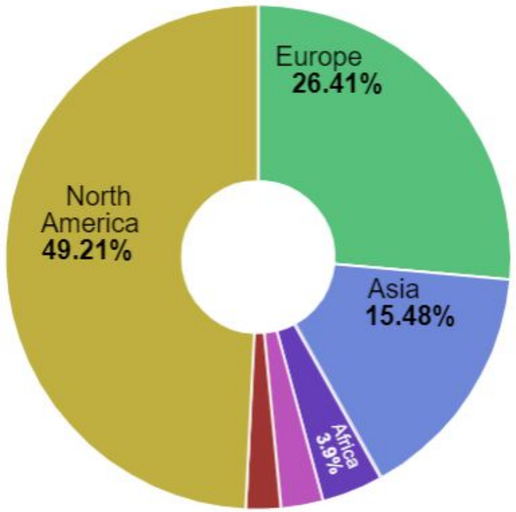


Elasticsearch index

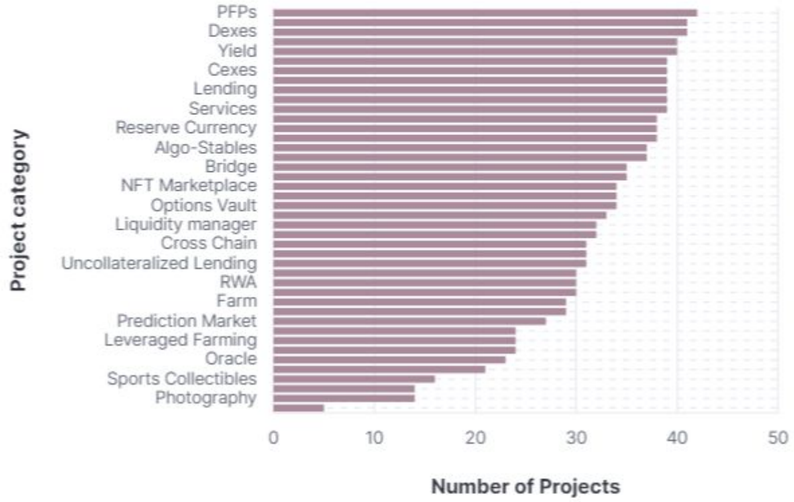
Kibana visualize

Demo

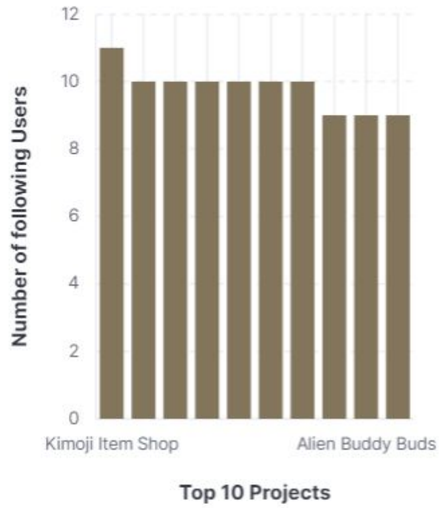
Continent category



Project Category



Following Projects



Total Users

The number of Users

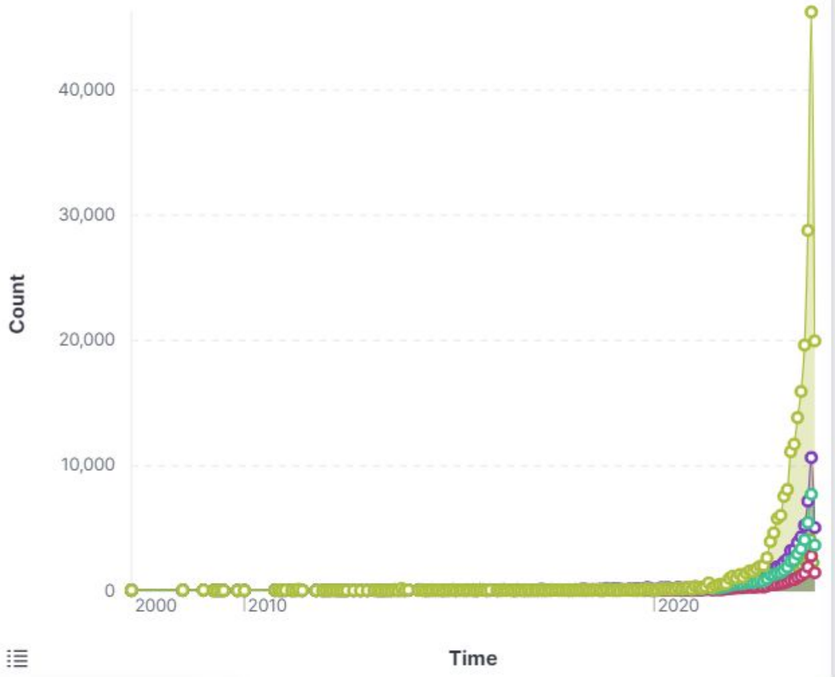
7,215

Total Tweets

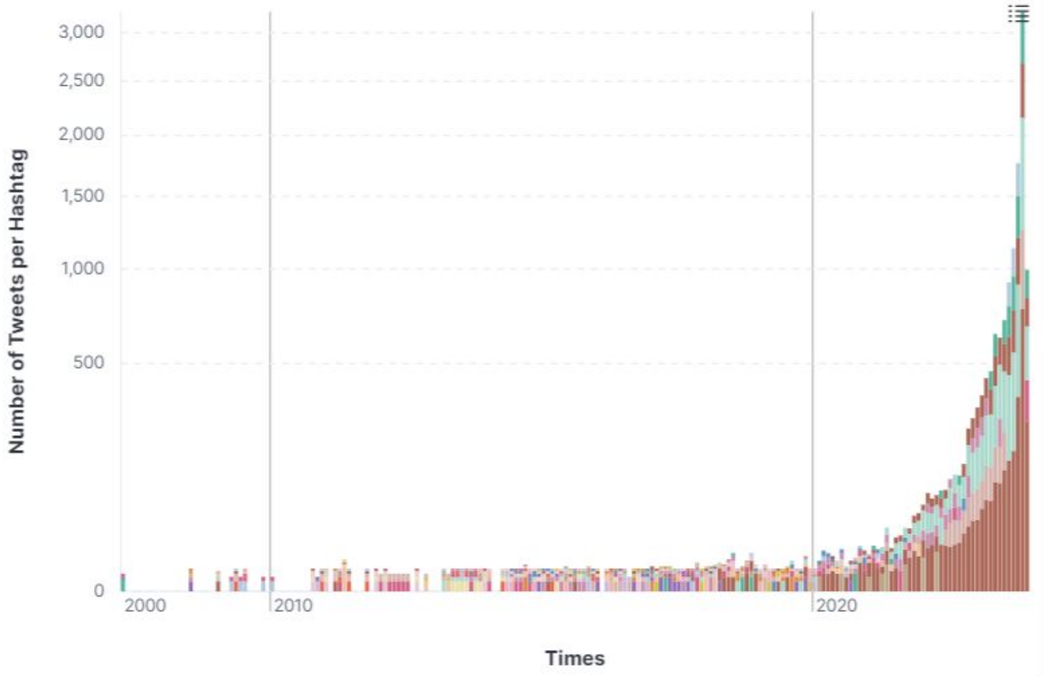
The number of Tweets

239,409

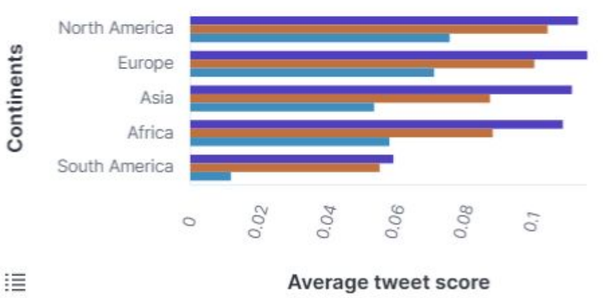
Interations



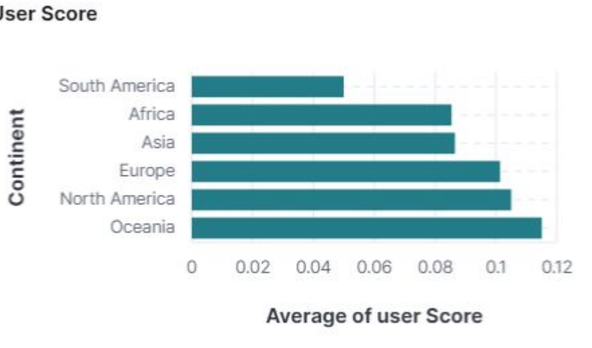
Top Hashtags



Tweets Score



User Score



Exit full screen

Cheers

TO THE NEW YEAR

THANKS!

Does anyone have any questions?