

AI-Driven Exploration and Prediction of Company Registration Trends with Registrar of Companies(ROC)

Phase 3 : Development part 1

Libraries Required:

```
import pandas as pd

import matplotlib.pyplot as plt

from google.colab import files

uploaded = files.upload()

for fn in uploaded.keys():

    print('User uploaded file "{name}" with length {length} bytes'.format(

        name=fn, length=len(uploaded[fn])))

# Load the data

df = pd.read_csv('Plantation_Companies.csv')

df.head(20)

S.No  CIN  COMPANY NAME  DATE OF REGISTRATION  COMPANY ADDRESS

0 1  U01132WB1885PLC000513  ARYA TEA CO LTD  5/16/1885  37 SHAKESPEARE SARANI 4TH FLOOR KOLKATA West...

1 2  U01132WB1878PLC000368  HIND TEA CO LTD  7/12/1878  KOLKATA, WEST BENGAL W.B KOLKATA West Bengal ...

2 3  L01132WB1885PLC000505  MANABARRIE TEA CO LIMITED  1/3/1885  28/1, SHAKESPEARE SARANI. GANGA JAMUNA BUILDIN...

3 4  L01132WB1874PLC000281  MOTHOLA COMPANY LTD  3/5/1874  707 CENTRAL PLAZA 2/6 SARAT BOSE RD KOLKATA ...

4 5  L01132WB1889PLC000576  NEW CHUMTA TEA COMPANY LIMITED  6/24/1889  3 NETAJI SUBHAS ROAD, MCLED HOUSE KOLKATA W...

5 6  U01132WB1896PLC001049  PHASKOWA TEA CO LTD  1/11/1896  7 SWALLOW LANE KOLKATA West Bengal INDIA 70...

6 7  L01132WB1891PLC000687  PAHARGOOMIAH TEA ASSOCIATION LTD  5/6/1891  28/2 Shakespeare Sarani Room No.803, 8th Floor...

7 8  U01132WB1871PLC000233  SINGELL TEA AND AGRICULTURAL INDUSTRIES LTD  11/15/1871  SUITE-17, CHOWRINGHEE MANSIONS, 30, JAWAHARLAL...

8 9  U01132WB1874PLC000306  THE LACKATOORAH TEA CO LTD  12/5/1874  27, BRABOURNE ROAD, 8th floor Kolkata West ...

9 10  U01132AS1876PLC000003  CACHAR NATIVE JOINT STOCK CO LTD  8/31/1876  CLUB ROAD SILCHAR Assam INDIA 788001

10 11  U01132WB1882PLC000427  RUNGAMATTEE TEA & INDUSTRIES LTD  2/15/1882  90/31, DIAMOND HARBOUR ROAD, KOLKATA West B...
```

11 12 L01132WB1893PLC000742TONGANI TEA COMPANY LIMITED 2/4/1893 OCTAVIUS CENTRE,3RD FLOOR 15B,HEMANTA BASU SAR...

12 13 U01132AS1890PLC000043 JHIRIGHAT NATIVE TEA CO LTD 6/9/1890 G.S.ROAD, DISPUR, DIST. KAMRUP, GUWAHATI As...

13 14 U01132WB1900PLC000413 SUNGMA TEA CO LTD 3-30-1900 23, GANESH CHANDRA AVENUECALCUTTA W.B. W.B. We...

14 15 U01132WB1900PLC001472 ATIABARI TEA CO LTD 7-14-1900 ARUN TEA WARE HOUSE COMPUNDSEVOKE ROAD II MILE...

15 16 L01132WB1900PLC000292 JOONKTOLLEE TEA & INDUSTRIES LTD. 8-7-1900 21, STRAND ROAD KOLKATA West Bengal INDIA 700001

16 17 L01132WB1901PLC001494 THE CHAMONG TEA CO LTD 5-30-1901 12 GOVERNMENT PLACE EAST KOLKATA West Bengal I...

17 18 L01132WB1905PLC001594 RASOI LTD 2-3-1905 RASOI COURT, 20 SIR R.N. MUKHERJEE ROAD. KOLKA...

18 19 L01132WB1906PLC001648 PUTIN BAREE TEA ASSOCIATION LTD 2-13-1906 24 NETAJI SUBHAS ROAD KOLKATA West Bengal INDI...

19 20 U01132WB1907PLC001779 LONGVIEW TEA & AGRO LIMITED 6-7-1907 51, SHAKESPEARE SARANI 2ND FLOOR KOLKATA West ...

df.isna().sum()

S.No 0

CIN 0

COMPANY NAME 0

DATE OF\nREGISTRATION 0

COMPANY ADDRESS 0

Date of Registraion 0

Year 0

dtype: int64

df.dtypes

S.No int64

CIN object

COMPANY NAME object

DATE OF\nREGISTRATION object

COMPANY ADDRESS object

Date of Registraion datetime64[ns]

Year int64

```
dtype: object
```

```
# Convert the 'Date of Registration' column to datetime
```

```
df['Date of Registraion'] = pd.to_datetime(df['DATE OF\nREGISTRATION'])
```

```
# Extract the year from the date
```

```
df['Year'] = df['Date of Registraion'].dt.year
```

```
# Count the number of companies registered each year
```

```
registration_trends = df.groupby('Year').size()
```

```
# Plot the trends
```

```
plt.figure(figsize=(12,6))
```

```
plt.plot(registration_trends.index, registration_trends.values, marker='o')
```

```
plt.xlabel('Year')
```

```
plt.ylabel('Number of Companies Registered')
```

```
plt.title('Trend of Company Registrations')
```

```
plt.grid(True)
```

```
plt.show()
```

Trend of Company Registrations

