



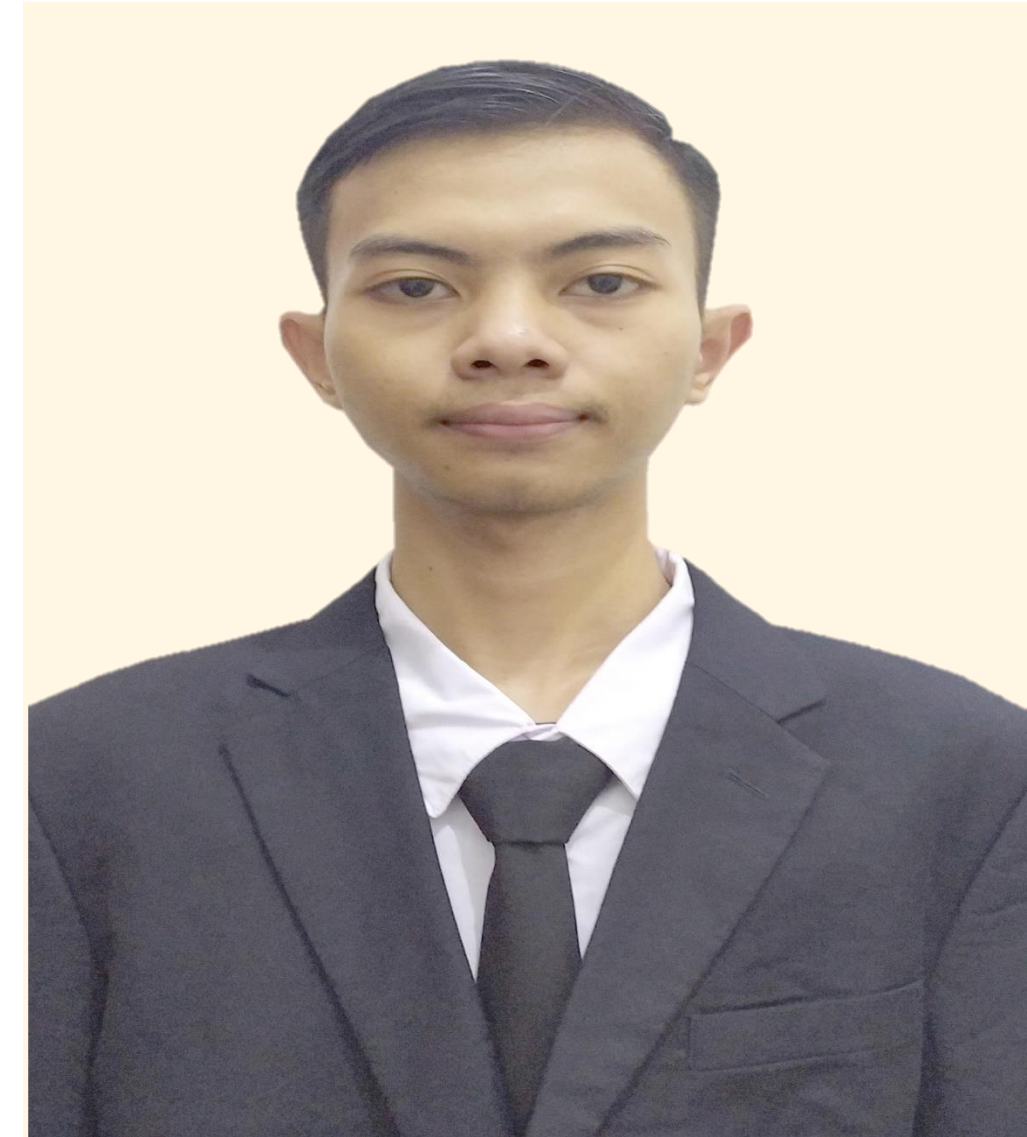
# Pokemon Data Analysis **PORTFOLIO**

By Muhammad Rafli Fauzi

# INTRODUCING ABOUT ME

I am an active student of Sultan Ageng Tirtayasa University, Department of Electrical Engineering with a great passion for a career in Information and Technology (IT), especially Machine Learning, Data science, Data Analyst and AI.

During college I was active as a computer laboratory assistant, majoring in electrical engineering, where I was tasked with teaching other students who contracted practicum courses in the computer laboratory. I was able to do this well and stay focused on my studies so that I was able to get a good GPA.



**Muhammad Rafli Fauzi**

Student

# EDUCATION

I am currently a student in the department of electrical engineering, faculty of engineering, Sultan Ageng Tirtayasa University. Previously I studied at SMK 4 Negeri Jakarta with a major in mechatronics engineering.

**2022/2023 – Present**

**Sultan Ageng Tirtayasa University**

Active student of electrical  
engineering major

**2018/2019 – 2021/2022**

**SMK 4 Negeri Jakarta**

Graduate from mechatronics  
major

# personal SKILLS

I have a strong interest in IT, especially related to AI, Machine Learning, Data Science and Data Analyst. Some of the skills I have include.



python™

**Python Language  
Programming**



**Google Colaboratoty**



**Ms. Office**



**Visual Studio Code**

# Pokemon Data Analysis PORTFOLIO

This project portfolio was created in order to fulfill the bootcamp assignment from dibimbing.id. In this portfolio, I try to analyze the pokemon with the highest and lowest values in the HP, Attack, Defense and Speed columns. In addition, I also made a graph of the total number of each type of pokemon available.

## 01

### HIGHEST VALUE

Analyze the pokemon with the highest values in each column in the table. Starting from HP, Attack, Defense and Speed.

## 02

### LOWEST VALUE

Analyze the pokemon with the lowest values in each column in the table. Starting from HP, Attack, Defense and Speed.

## 03

### NUMBER OF EACH TYPE

Analyze the number of each type of pokemon in the Type 1 and Type 2 columns, and display them as a bar chart.

# Pokemon Dataset

1s

index	#	Name	Type 1	Type 2	Total	HP	Attack	Defense	Sp. Atk	Sp. Def	Speed		
0	1	Bulbasaur	Grass	Poison	318	45	49	49	65	65	45	1	false
1	2	Ivysaur	Grass	Poison	405	60	62	63	80	80	60	1	false
2	3	Venusaur	Grass	Poison	525	80	82	83	100	100	80	1	false
3	3	VenusaurMega Venusaur	Grass	Poison	625	80	100	123	122	120	80	1	false
4	4	Charmander	Fire	NaN	309	39	52	43	60	50	65	1	false
5	5	Charmeleon	Fire	NaN	405	58	64	58	80	65	80	1	false
6	6	Charizard	Fire	Flying	534	78	84	78	109	85	100	1	false
7	6	CharizardMega Charizard X	Fire	Dragon	634	78	130	111	130	85	100	1	false
8	6	CharizardMega Charizard Y	Fire	Flying	634	78	104	78	159	115	100	1	false
9	7	Squirtle	Water	NaN	314	44	48	65	50	64	43	1	false
10	8	Wartortle	Water	NaN	405	59	63	80	65	80	58	1	false
11	9	Blastoise	Water	NaN	530	79	83	100	85	105	78	1	false
12	9	BlastoiseMega Blastoise	Water	NaN	630	79	103	120	135	115	78	1	false
13	10	Caterpie	Bug	NaN	195	45	30	35	20	20	45	1	false
14	11	Metapod	Bug	NaN	205	50	20	55	25	25	30	1	false
15	12	Butterfree	Bug	Flying	395	60	45	50	90	80	70	1	false
16	13	Weedle	Bug	Poison	195	40	35	30	20	20	50	1	false
17	14	Kakuna	Bug	Poison	205	45	25	50	25	25	35	1	false
18	15	Beedrill	Bug	Poison	395	65	90	40	45	80	75	1	false
19	15	BeedrillMega Beedrill	Bug	Poison	495	65	150	40	15	80	145	1	false
20	16	Pidgey	Normal	Flying	251	40	45	40	35	35	56	1	false
21	17	Pidgeotto	Normal	Flying	349	63	60	55	50	50	71	1	false
22	18	Pidgeot	Normal	Flying	479	83	80	75	70	70	101	1	false
23	18	PidgeotMega Pidgeot	Normal	Flying	579	83	80	80	135	80	121	1	false
24	19	Rattata	Normal	NaN	253	30	56	35	25	35	72	1	false

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# 01. HIGHEST VALUE

The pokemon with the highest scores for the HP, Attack, Defense and Speed columns.



The Pokemon with the highest HP value is Blissey with a value of 255.



The Pokemon with the highest Attack value is Mewtwo with a value of 190.



The Pokemon with the highest Defense value is Steelix with a value of 230.



The Pokemon with the highest Speed value is Deoxys Speed Forme with a value of 180.

The results regarding who are the pokemon who have the highest value in the HP, Attack, Defense and Speed columns are obtained using the program code as follows.

#### Pokemon with Highest HP Value

```
✓ [9] # Fungsi untuk menemukan pemilik nilai tertinggi pada suatu kolom
0s def nilai_tertinggi(df, kolom):
    nilai_tertinggi = df[kolom].max()
    baris_nilai_tertinggi = df.loc[df[kolom] == nilai_tertinggi]
    pemilik_nilai_tertinggi = baris_nilai_tertinggi['Name'].iloc[0]
    return nilai_tertinggi, pemilik_nilai_tertinggi

# Menemukan nilai tertinggi pada kolom 'HP'
nilai_hp, pemilik_hp = nilai_tertinggi(df, 'HP')
print("Nilai tertinggi pada kolom 'HP' dimiliki oleh:", pemilik_hp)
print("Nilainya adalah:", nilai_hp)
```

Nilai tertinggi pada kolom 'HP' dimiliki oleh: Blissey  
Nilainya adalah: 255

#### Pokemon with Highest Defense Value

```
✓ [16] # Fungsi untuk menemukan pemilik nilai tertinggi pada suatu kolom
0s def nilai_tertinggi(df, kolom):
    nilai_tertinggi = df[kolom].max()
    baris_nilai_tertinggi = df.loc[df[kolom] == nilai_tertinggi]
    pemilik_nilai_tertinggi = baris_nilai_tertinggi['Name'].iloc[0]
    return nilai_tertinggi, pemilik_nilai_tertinggi

# Menemukan nilai tertinggi pada kolom 'defense'
nilai_defense, pemilik_defense = nilai_tertinggi(df, 'Defense')
print("Nilai tertinggi pada kolom 'Defense' dimiliki oleh:", pemilik_defense)
print("Nilainya adalah:", nilai_defense)
```

Nilai tertinggi pada kolom 'Defense' dimiliki oleh: SteelixMega Steelix  
Nilainya adalah: 230

#### Pokemon with Highest Attack Value

```
✓ [10] # Fungsi untuk menemukan pemilik nilai tertinggi pada suatu kolom
0s def nilai_tertinggi(df, kolom):
    nilai_tertinggi = df[kolom].max()
    baris_nilai_tertinggi = df.loc[df[kolom] == nilai_tertinggi]
    pemilik_nilai_tertinggi = baris_nilai_tertinggi['Name'].iloc[0]
    return nilai_tertinggi, pemilik_nilai_tertinggi

# Menemukan nilai tertinggi pada kolom 'Attack'
nilai_attack, pemilik_attack, = nilai_tertinggi(df, 'Attack')
print("Nilai tertinggi pada kolom 'Attack' dimiliki oleh:", pemilik_attack)
print("Nilainya adalah:", nilai_attack)
```

➡ Nilai tertinggi pada kolom 'Attack' dimiliki oleh: MewtwoMega Mewtwo X  
Nilainya adalah: 190

#### Pokemon with Highest Speed Value

```
✓ [11] # Fungsi untuk menemukan pemilik nilai tertinggi pada suatu kolom
0s def nilai_tertinggi(df, kolom):
    nilai_tertinggi = df[kolom].max()
    baris_nilai_tertinggi = df.loc[df[kolom] == nilai_tertinggi]
    pemilik_nilai_tertinggi = baris_nilai_tertinggi['Name'].iloc[0]
    return nilai_tertinggi, pemilik_nilai_tertinggi

# Menemukan nilai tertinggi pada kolom 'Speed'
nilai_speed, pemilik_speed = nilai_tertinggi(df, 'Speed')
print("Nilai tertinggi pada kolom 'Speed' dimiliki oleh:", pemilik_speed)
print("Nilainya adalah:", nilai_speed)
```

Nilai tertinggi pada kolom 'Speed' dimiliki oleh: DeoxysSpeed Forme  
Nilainya adalah: 180



## 02. LOWEST VALUE

The pokemon with the lowest scores for the HP, Attack, Defense and Speed columns.



The Pokemon with the lowest HP value is Shedinja with a value of 1.



The Pokemon with the lowest Attack and Defense value is Chansey with a value of 5.



The Pokemon with the lowest speed value is Shuckle with a value of 5.

The results regarding who are the pokemon who have the lowest value in the HP, Attack, Defense and Speed columns are obtained using the program code as follows.

#### Pokemon with Lowest HP Value

```
✓ [24] # Fungsi untuk menemukan pemilik nilai terendah pada suatu kolom
0s def nilai_terendah(df, kolom):
    nilai_terendah = df[kolom].min()
    baris_nilai_terendah = df.loc[df[kolom] == nilai_terendah]
    pemilik_nilai_terendah = baris_nilai_terendah['Name'].iloc[0]
    return nilai_terendah, pemilik_nilai_terendah

# Menemukan nilai terendah pada kolom 'HP'
nilai_hp, pemilik_hp = nilai_terendah(df, 'HP')
print("Nilai terendah pada kolom 'HP' dimiliki oleh:", pemilik_hp)
print("Nilainya adalah:", nilai_hp)
```

Nilai terendah pada kolom 'HP' dimiliki oleh: Shedinja  
Nilainya adalah: 1

#### Pokemon with Lowest Defense Value

```
✓ [26] # Fungsi untuk menemukan pemilik nilai terendah pada suatu kolom
0s def nilai_terendah(df, kolom):
    nilai_terendah = df[kolom].min()
    baris_nilai_terendah = df.loc[df[kolom] == nilai_terendah]
    pemilik_nilai_terendah = baris_nilai_terendah['Name'].iloc[0]
    return nilai_terendah, pemilik_nilai_terendah

# Menemukan nilai terendah pada kolom 'defense'
nilai_defense, pemilik_defense = nilai_terendah(df, 'Defense')
print("Nilai terendah pada kolom 'Defense' dimiliki oleh:", pemilik_defense)
print("Nilainya adalah:", nilai_defense)
```

Nilai terendah pada kolom 'Defense' dimiliki oleh: Chansey  
Nilainya adalah: 5

#### Pokemon with Lowest Attack Value

```
✓ [25] # Fungsi untuk menemukan pemilik nilai terendah pada suatu kolom
0s def nilai_terendah(df, kolom):
    nilai_terendah = df[kolom].min()
    baris_nilai_terendah = df.loc[df[kolom] == nilai_terendah]
    pemilik_nilai_terendah = baris_nilai_terendah['Name'].iloc[0]
    return nilai_terendah, pemilik_nilai_terendah

# Menemukan nilai terendah pada kolom 'Attack'
nilai_attack, pemilik_attack = nilai_terendah(df, 'Attack')
print("Nilai terendah pada kolom 'Attack' dimiliki oleh:", pemilik_attack)
print("Nilainya adalah:", nilai_attack)
```

Nilai terendah pada kolom 'Attack' dimiliki oleh: Chansey  
Nilainya adalah: 5

#### Pokemon with Highest Speed Value

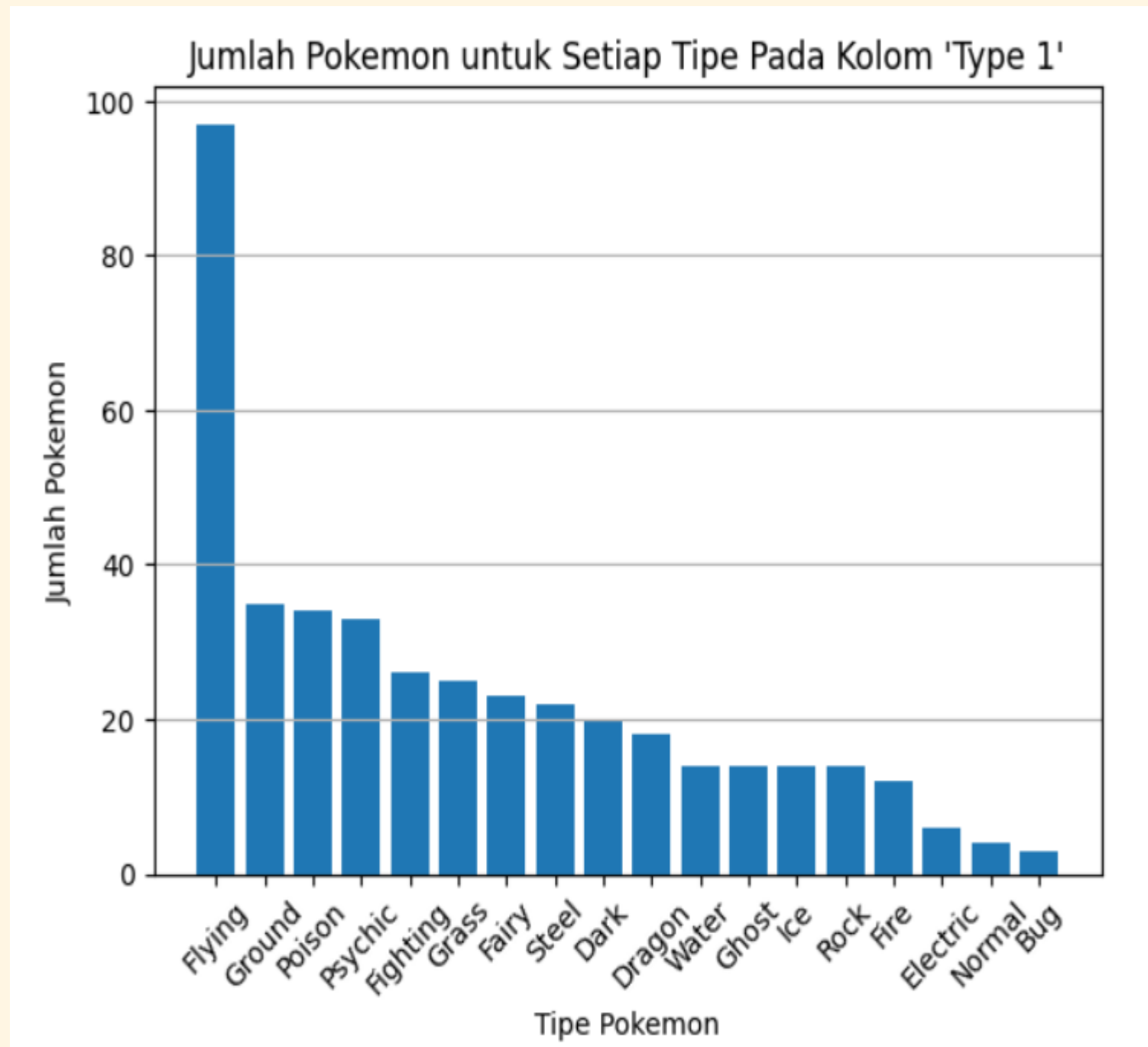
```
✓ [20] # Fungsi untuk menemukan pemilik nilai tertinggi pada suatu kolom
0s def nilai_tertinggi(df, kolom):
    nilai_tertinggi = df[kolom].max()
    baris_nilai_tertinggi = df.loc[df[kolom] == nilai_tertinggi]
    pemilik_nilai_tertinggi = baris_nilai_tertinggi['Name'].iloc[0]
    return nilai_tertinggi, pemilik_nilai_tertinggi

# Menemukan nilai tertinggi pada kolom 'Speed'
nilai_speed, pemilik_speed = nilai_tertinggi(df, 'Speed')
print("Nilai tertinggi pada kolom 'Speed' dimiliki oleh:", pemilik_speed)
print("Nilainya adalah:", nilai_speed)
```

Nilai tertinggi pada kolom 'Speed' dimiliki oleh: DeoxysSpeed Forme  
Nilainya adalah: 180

# 03. NUMBER OF EACH TYPE

In the type 1 column, the results of the number of each type of pokemon are as follows.



The bar chart results are obtained using the program code as follows.

```
0s # Menghitung jumlah pokemon untuk setiap tipe dalam kolom 'Type'
jumlah_pokemon_per_type = df['Type 1'].value_counts()

print("Jumlah pokemon untuk setiap tipe:")
print(jumlah_pokemon_per_type)
```

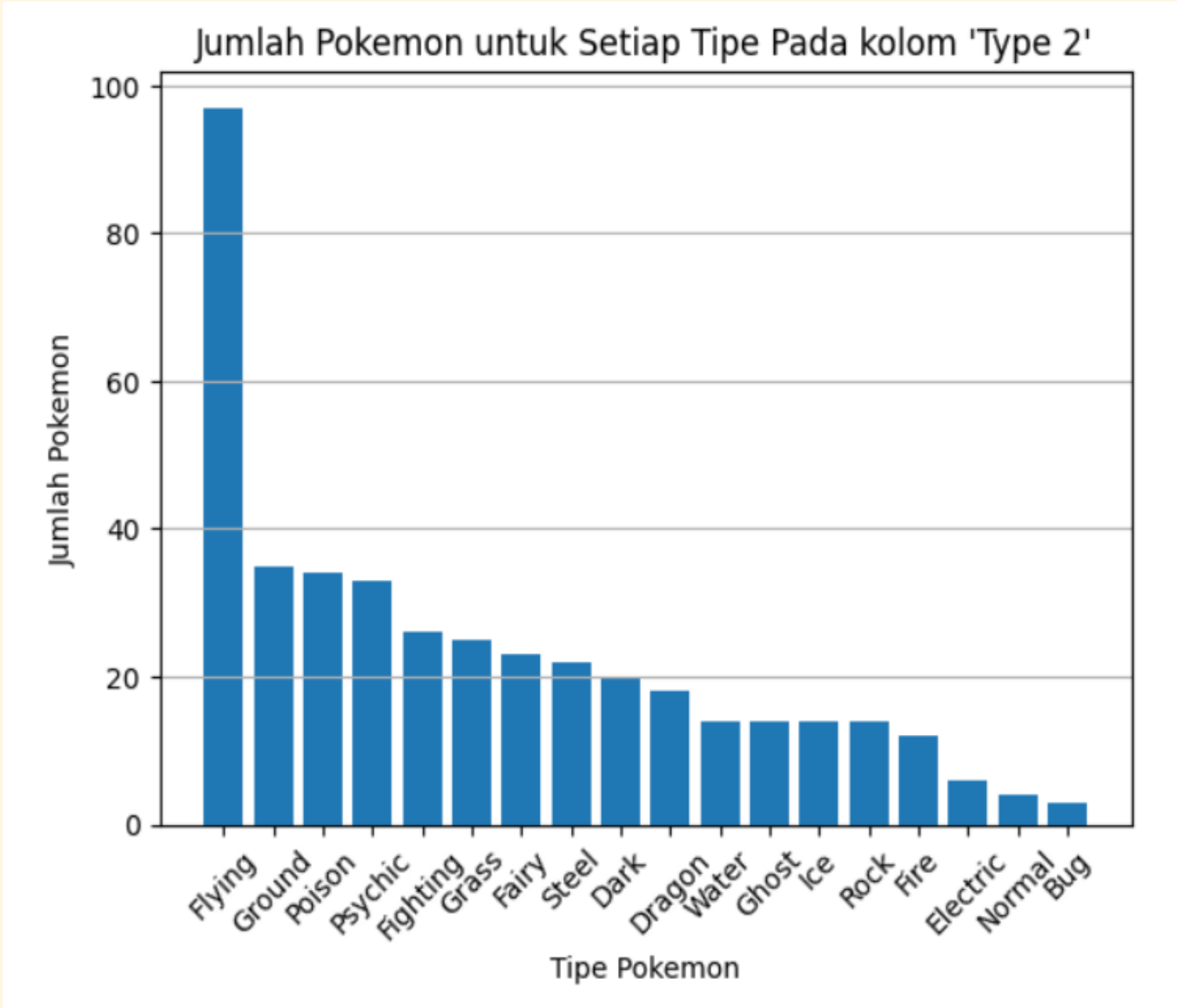
Jumlah pokemon untuk setiap tipe:

Water	112
Normal	98
Grass	70
Bug	69
Psychic	57
Fire	52
Electric	44
Rock	44
Dragon	32
Ground	32
Ghost	32
Dark	31
Poison	28
Steel	27
Fighting	27
Ice	24
Fairy	17
Flying	4

```
0s [41] # Membuat grafik
plt.bar(jumlah_pokemon_per_type.index, jumlah_pokemon_per_type.values)
plt.xlabel('Tipe Pokemon')
plt.ylabel('Jumlah Pokemon')
plt.title('Jumlah Pokemon untuk Setiap Tipe Pada Kolom \'Type 1\'')
plt.xticks(rotation=45)
plt.grid(axis='y')

# Menampilkan grafik
plt.show()
```

In the type 2 column, the results of the number of each type of pokemon are as follows.



The bar chart results are obtained using the program code as follows.

```
[35] # Menghitung jumlah pokemon untuk setiap tipe dalam kolom 'Type'
      jumlah_pokemon_per_type = df['Type 2'].value_counts()

      print("Jumlah pokemon untuk setiap tipe:")
      print(jumlah_pokemon_per_type)

      Jumlah pokemon untuk setiap tipe:
      Flying      97
      Ground      35
      Poison      34
      Psychic     33
      Fighting    26
      Grass       25
      Fairy       23
      Steel       22
      Dark        20
      Dragon      18
      Water       14
      Ghost       14
      Ice         14
      Rock        14
      Fire        12
      Electric     6
      Normal      4
      Bug         3
```

```
# Membuat grafik
plt.bar(jumlah_pokemon_per_type.index, jumlah_pokemon_per_type.values)
plt.xlabel('Tipe Pokemon')
plt.ylabel('Jumlah Pokemon')
plt.title('Jumlah Pokemon untuk Setiap Tipe Pada Kolom \'Type 2\'')
plt.xticks(rotation=45)
plt.grid(axis='y')

# Menampilkan grafik
plt.show()
```

# THANK YOU

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