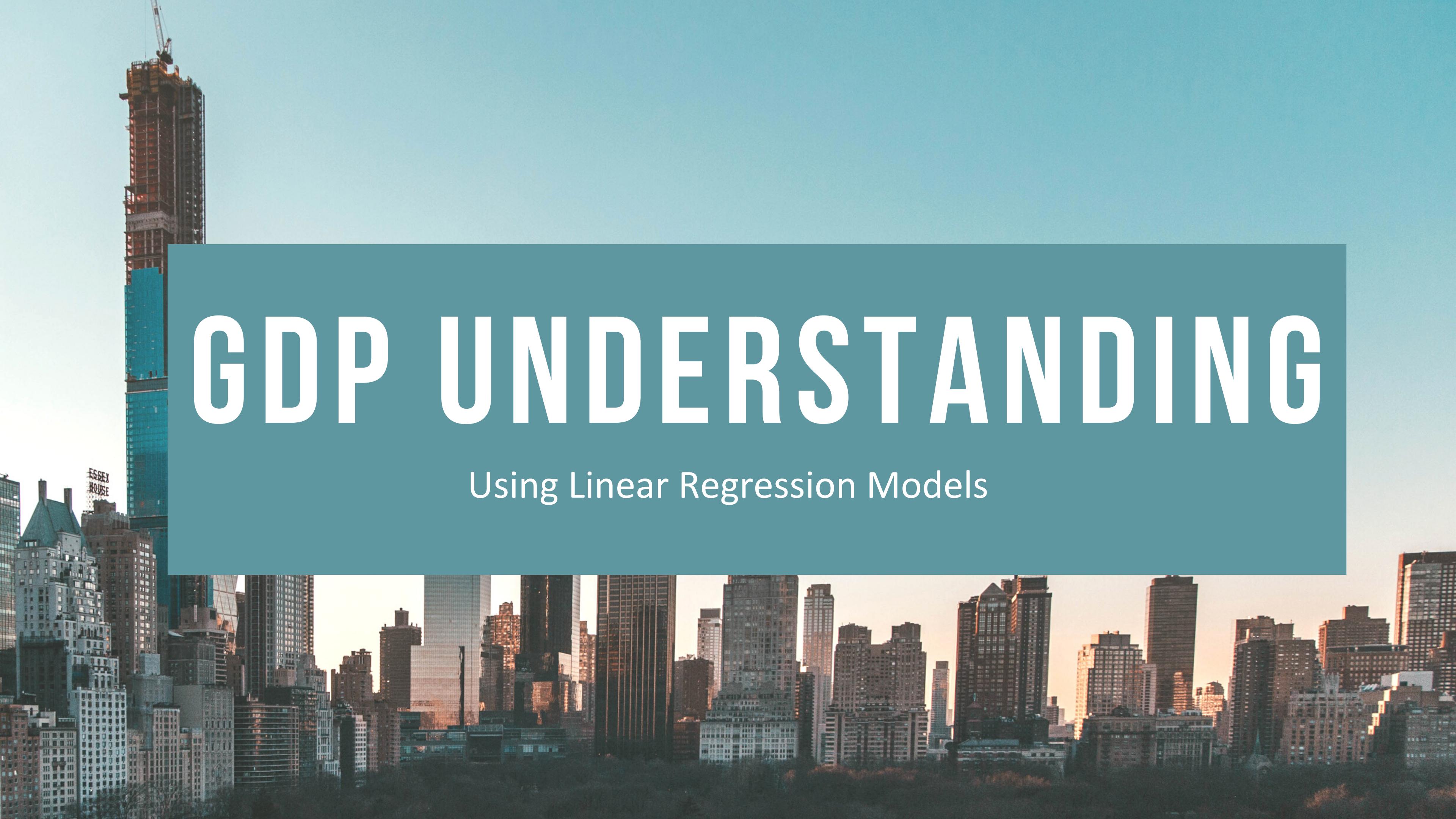


# GDP UNDERSTANDING

Using Linear Regression Models



# WHY IS THIS IMPORTANT?

GDP serves as a key barometer of a nation's economic health and prowess. By developing a robust predictive model, we gain the ability to unravel the intricate web of factors that underpin GDP performance. Such predictive capabilities have far-reaching implications, influencing financial decisions, policy-making, and strategic planning in various sectors.



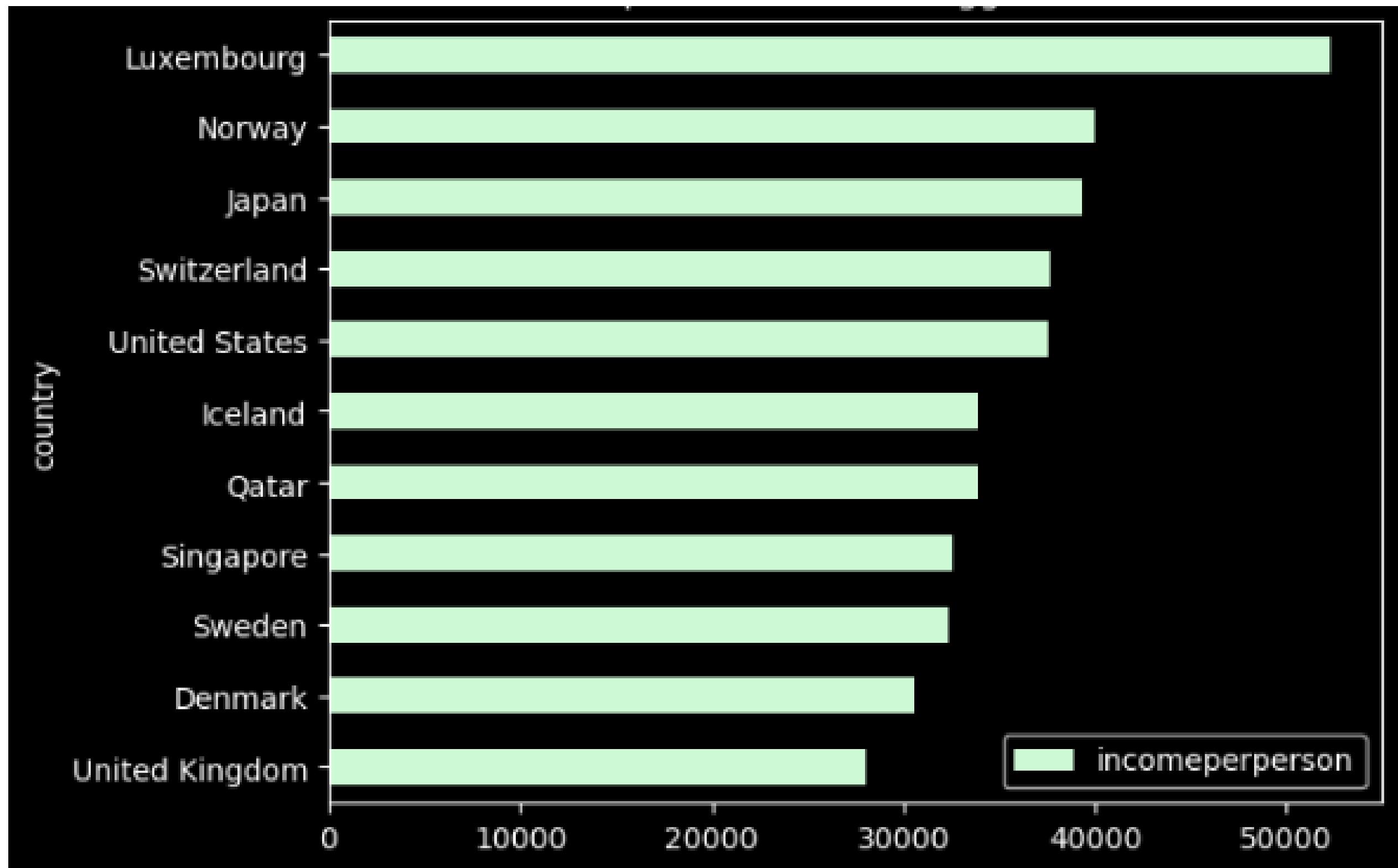
# UNDERSTANDING THE DATA

TAKEN FROM GAPMINDER SITE



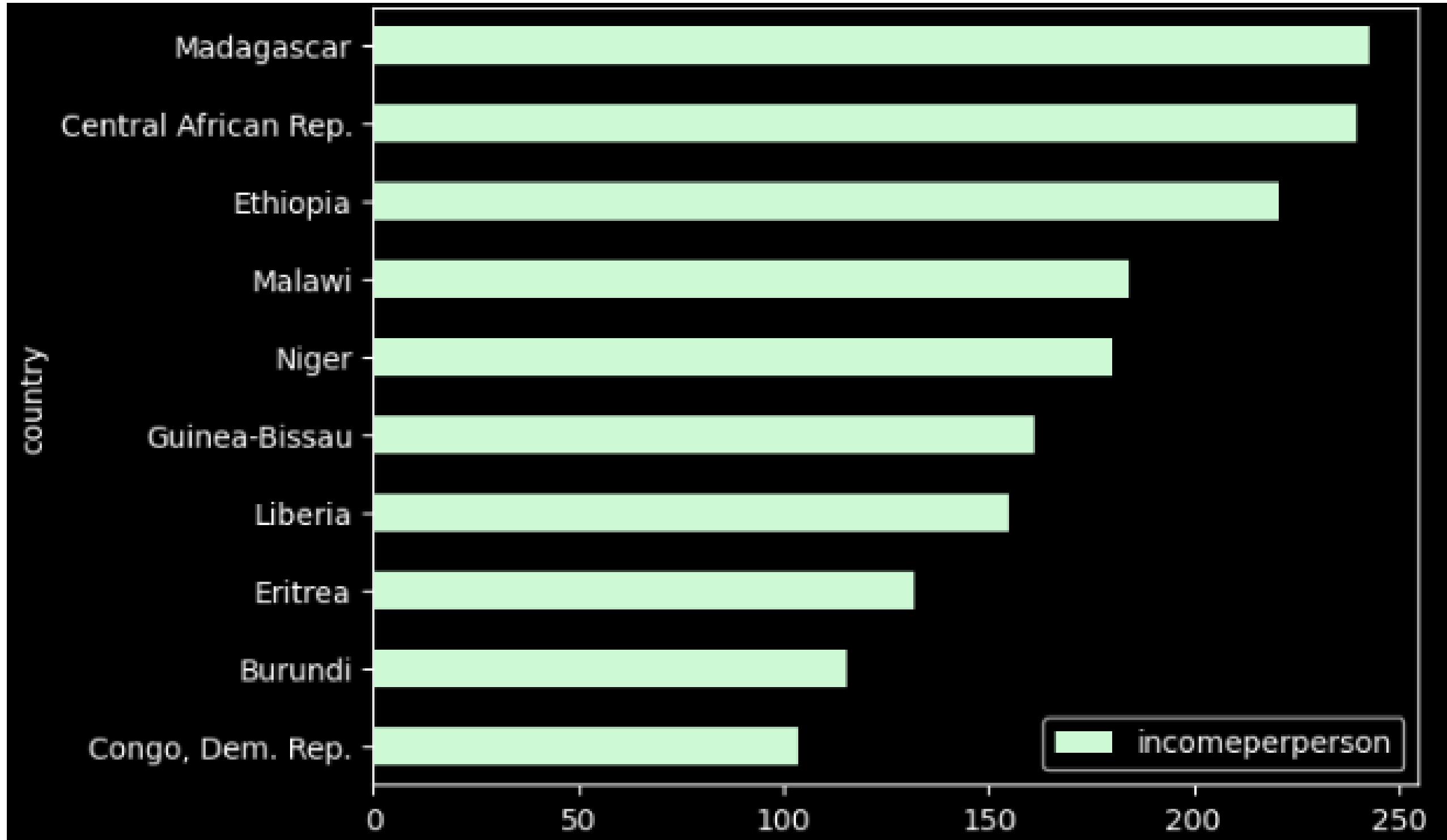
# COUNTRIES WITH THE HIGHEST GDP

UNDERSTANDING THE DATA

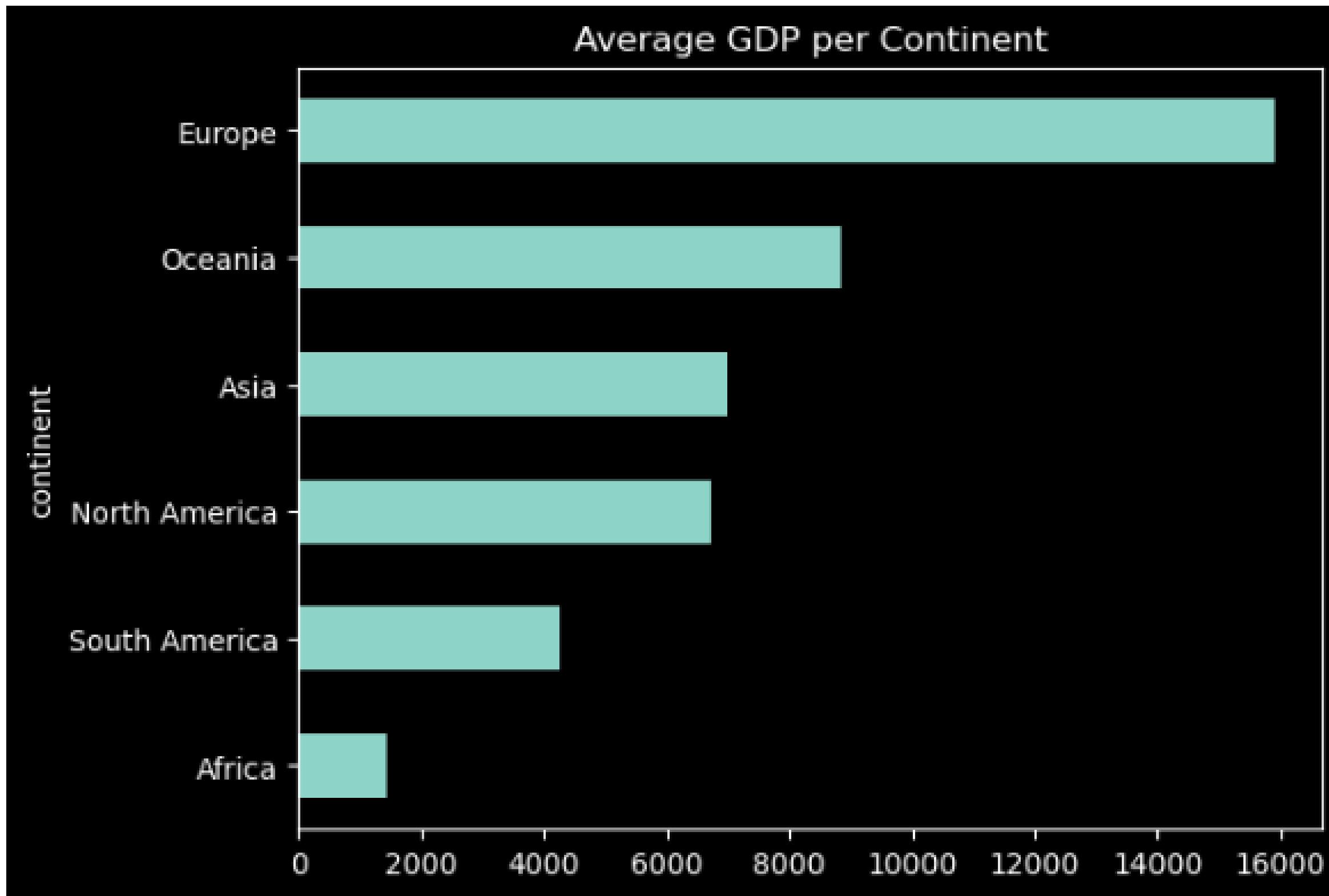


# COUNTRIES WITH THE LOWEST GDP

UNDERSTANDING THE DATA



# GDP DEPENDS ON THE CONTINENT?



# WHAT OTHER INDICATORS AFFECTS THE GDP?

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Alcohol Consumption



Armed Forces Rate



Breast Cancer Rate / HIV Rate



Co2 Emissions



Employ Rate



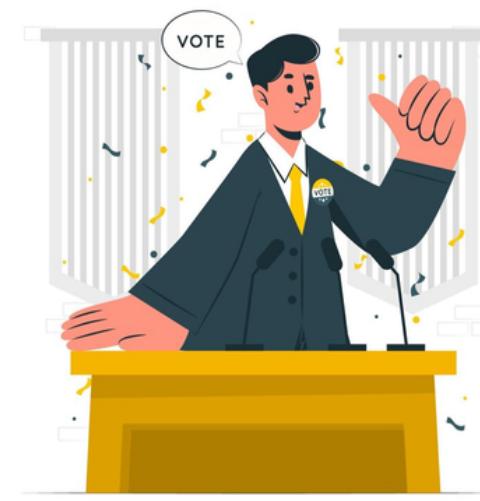
Internet Use Rate

# WHAT OTHER INDICATORS AFFECTS THE GDP?

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Life Expectancy / Suicide per 100th



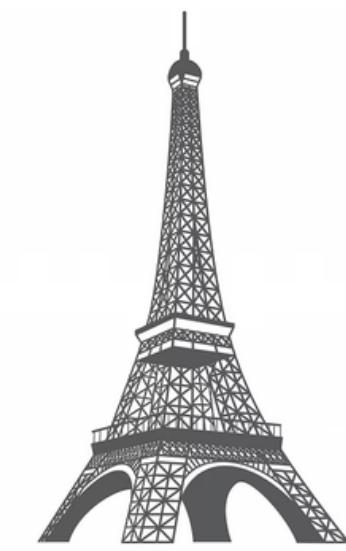
Polity Score



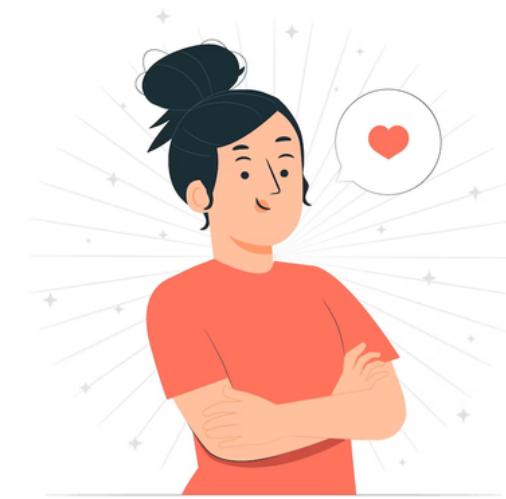
Oil Per Person



Electricity Consumption per Person

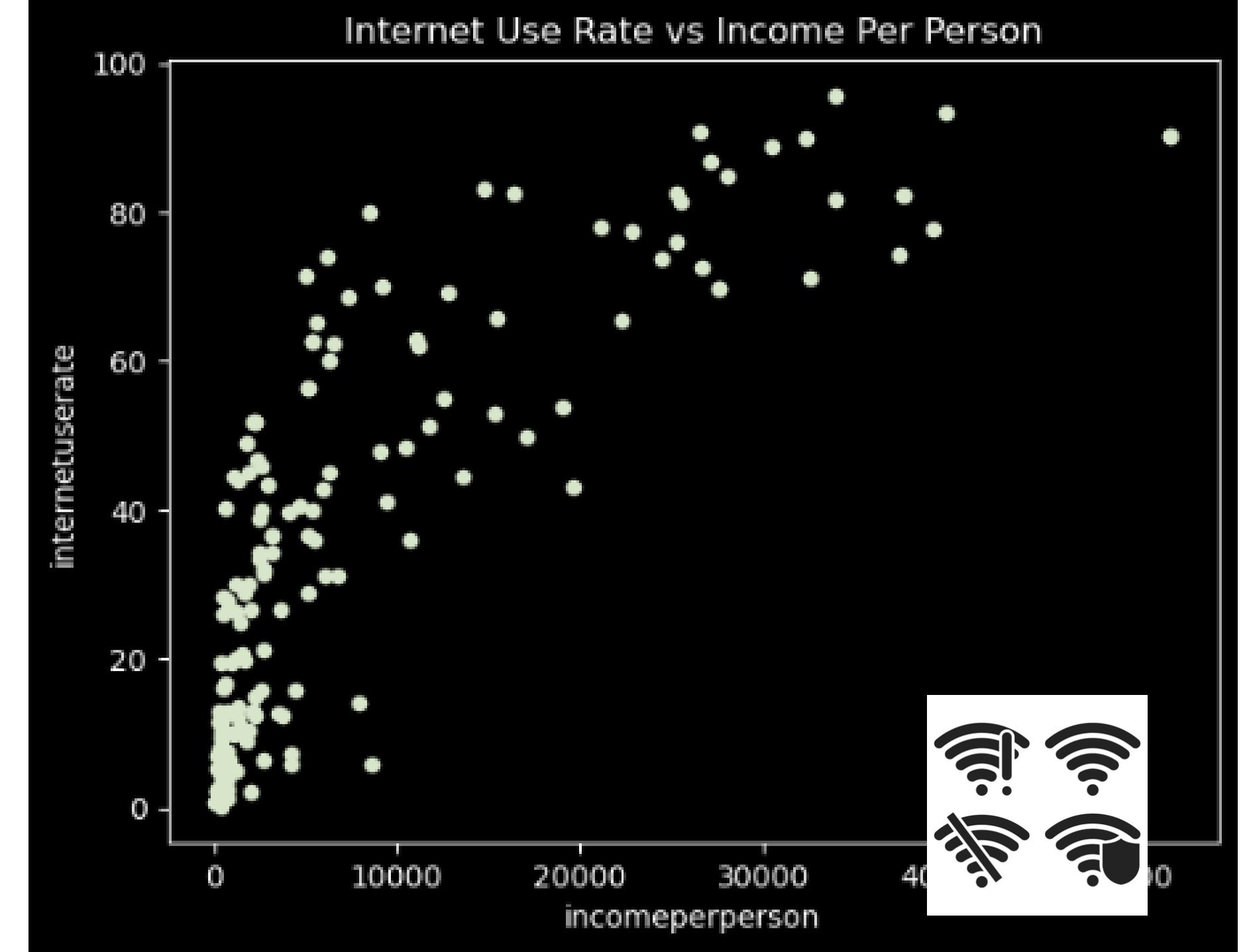
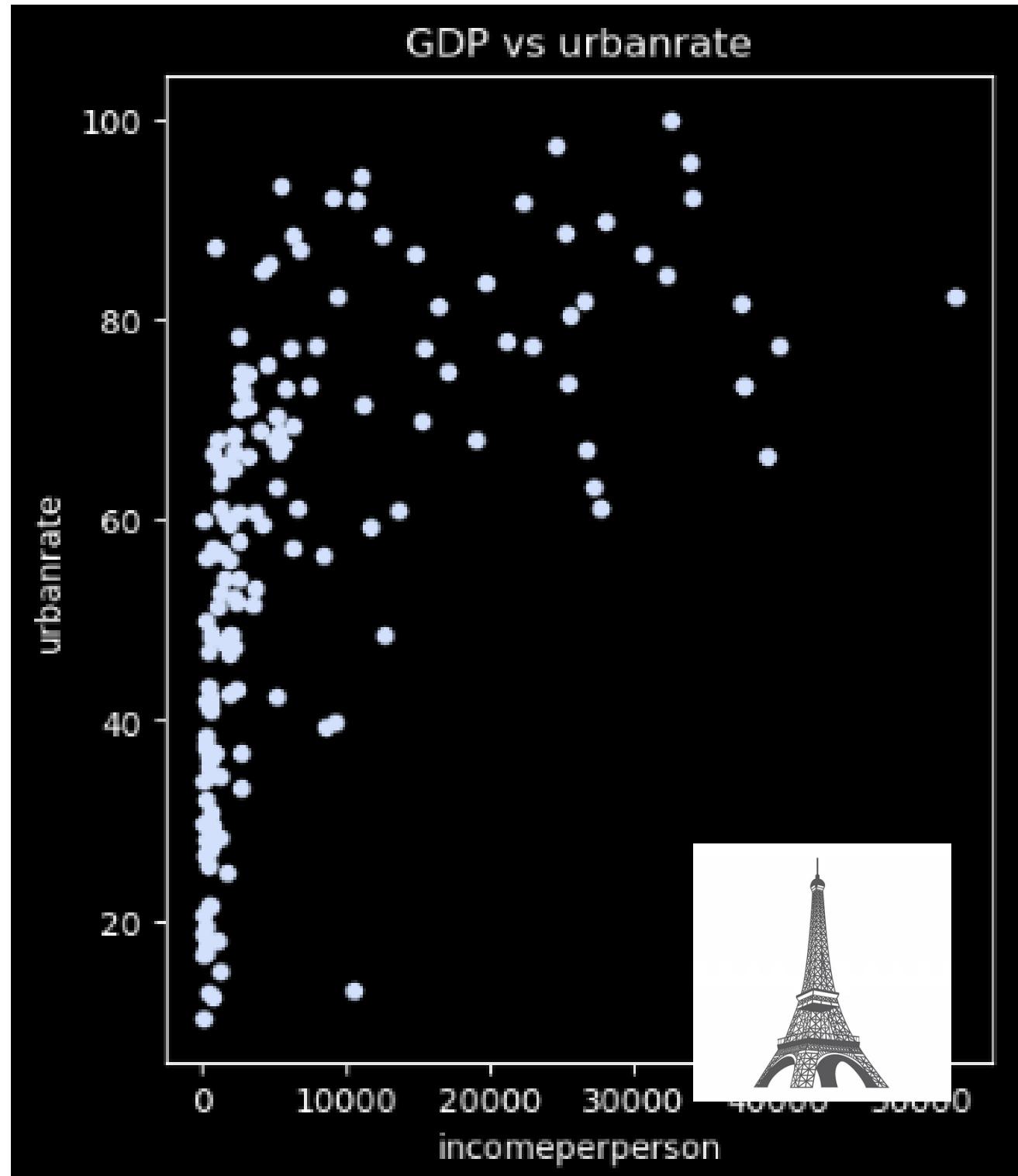


Urban Rate

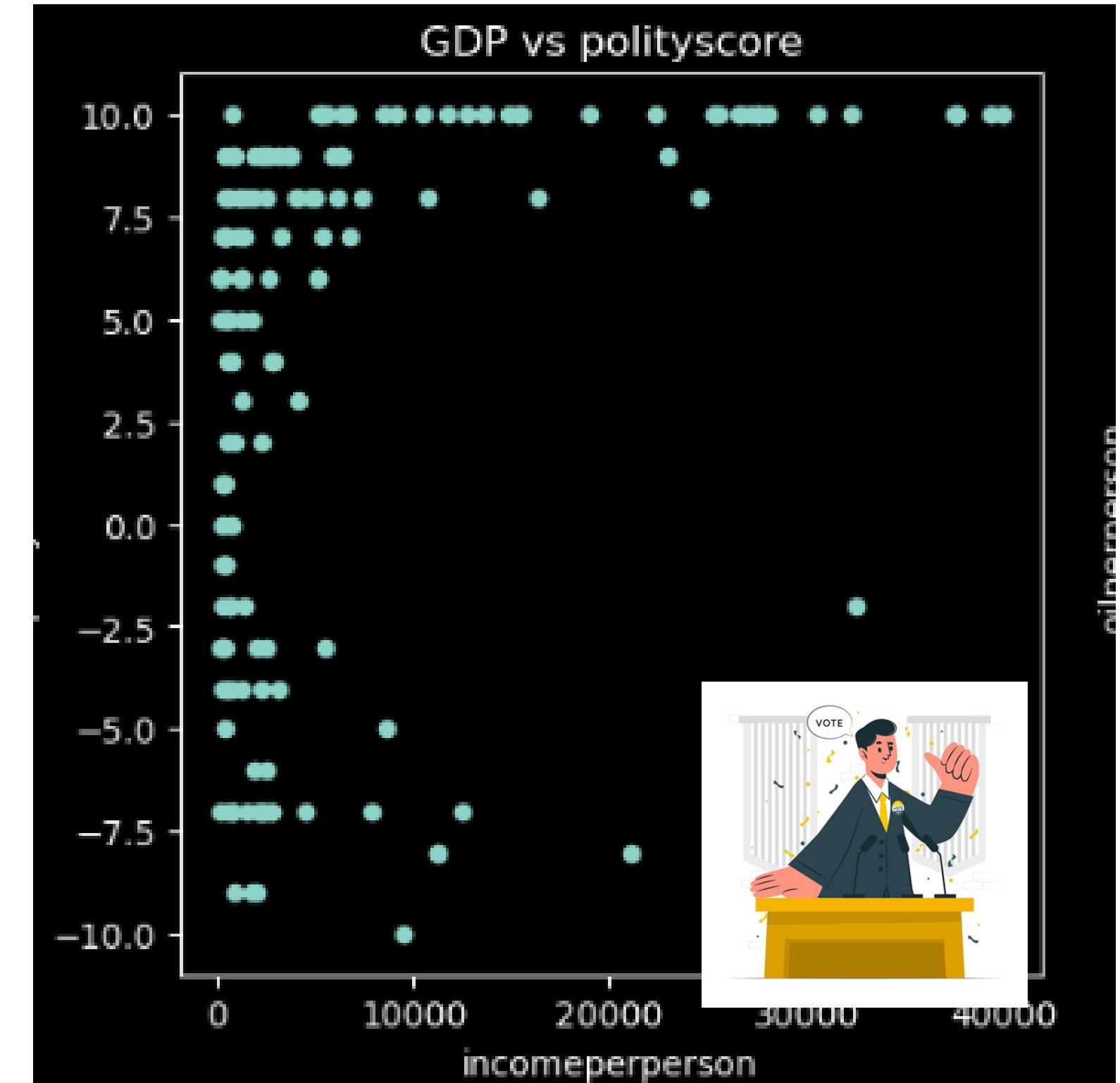
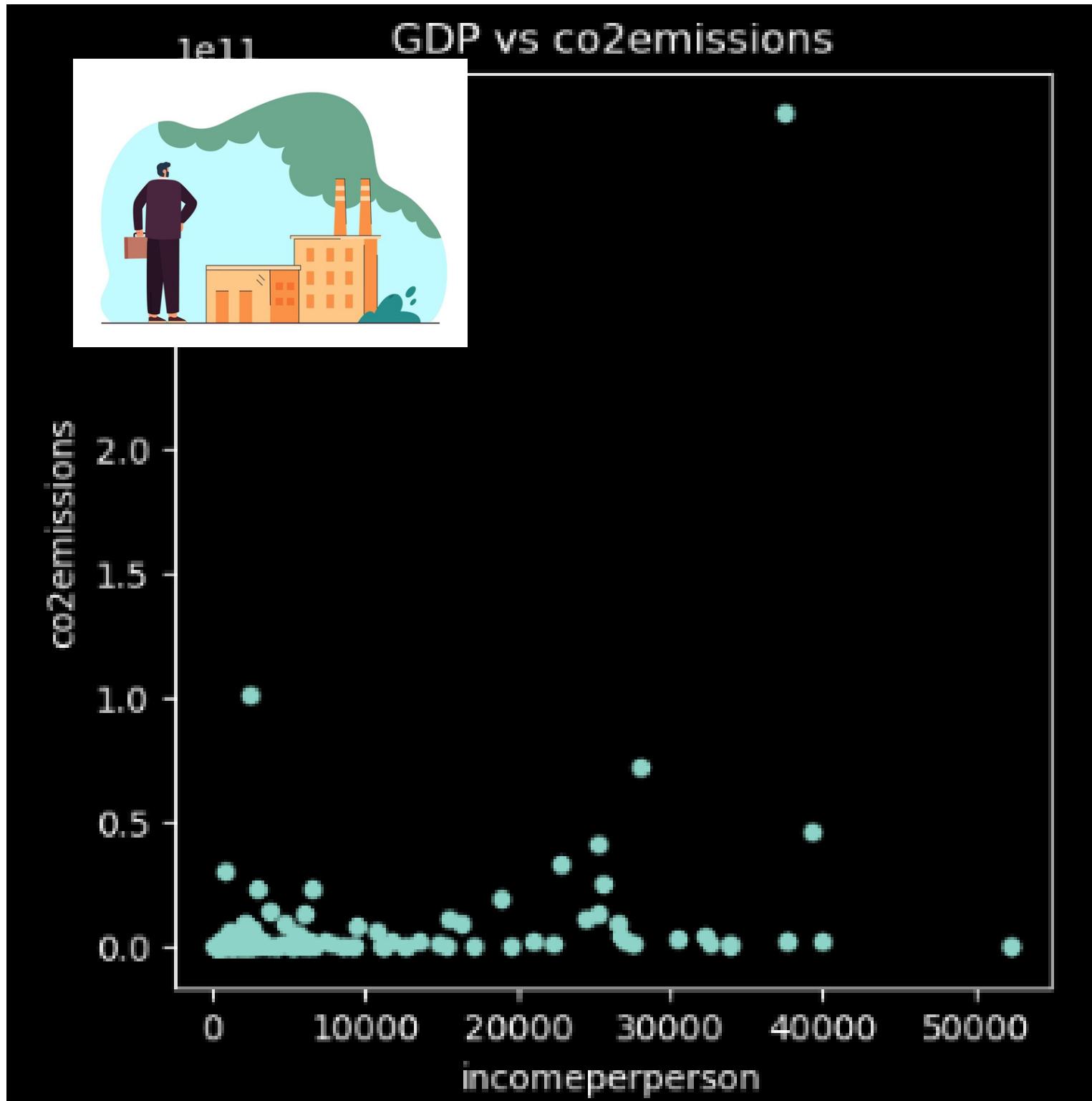


Female Employment Rate

# SOME INDICATORS PRESENTS RELATION WITH GDP



# OTHERS DOESN'T

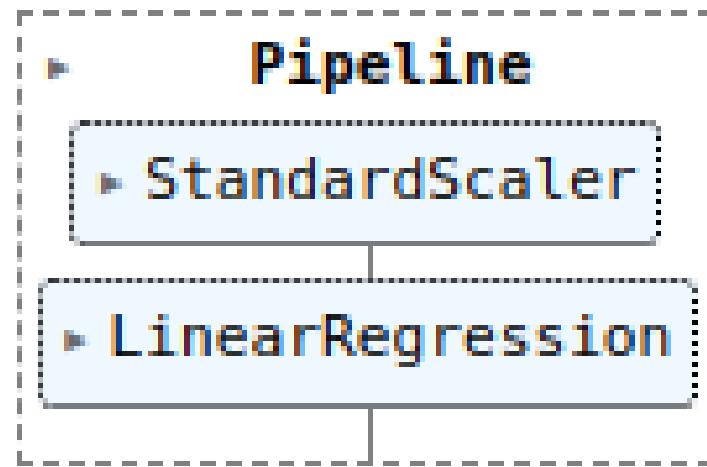


# TRAINING THE MODEL

USING LINEAR REGRESSION MODELS



# MODEL CHOSEN



# INDICATORS CHOSEN

Life Expectancy

Suicide per 100th

Continent

Internet Use Rate

Alcohol Consumption

Breast Cancer Per 100th

Employ Rate

Urban Rate

# FIRST MODEL

R2: 0.6

## Training

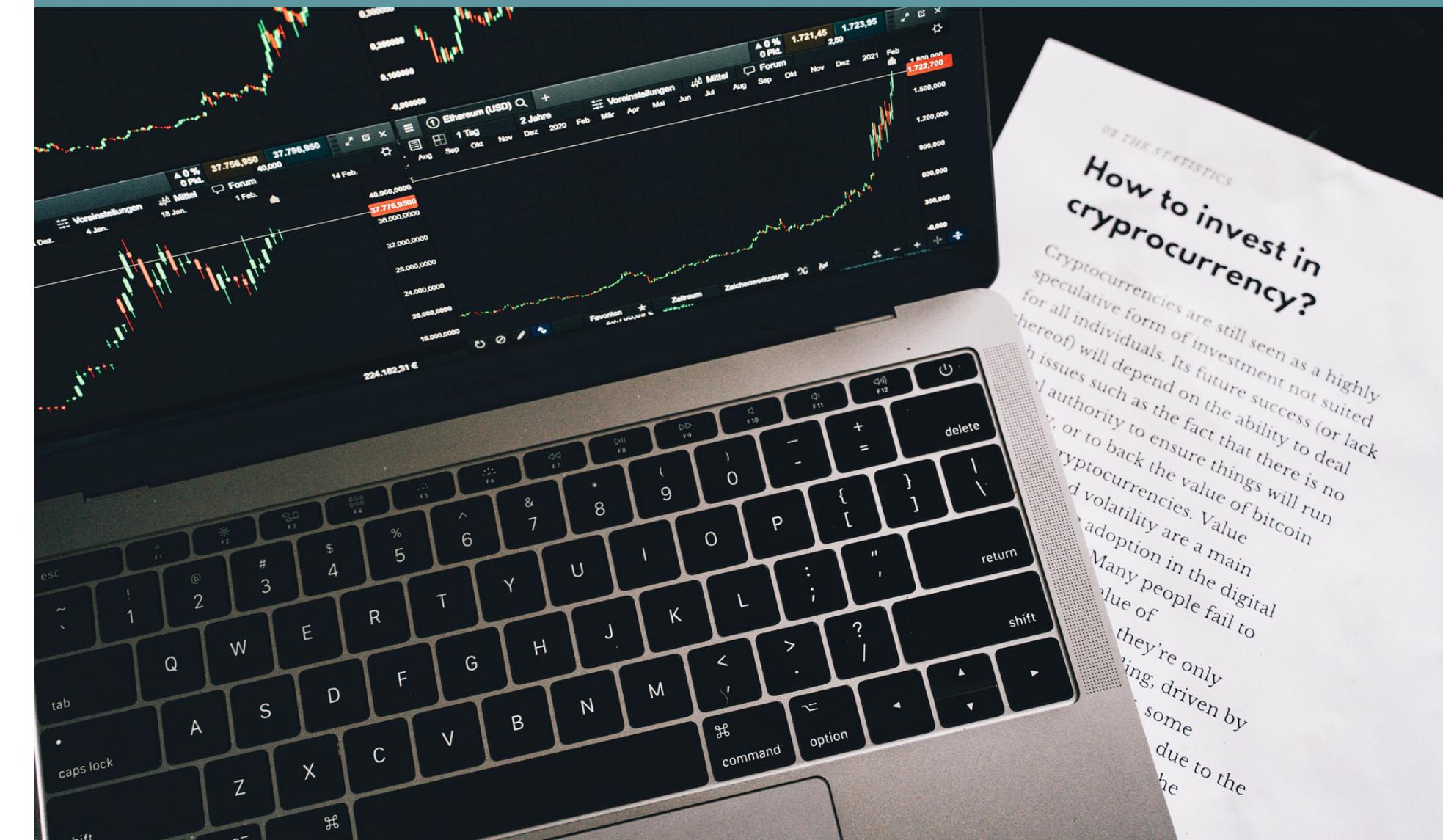
MAE: 2089

RMSE: 2898

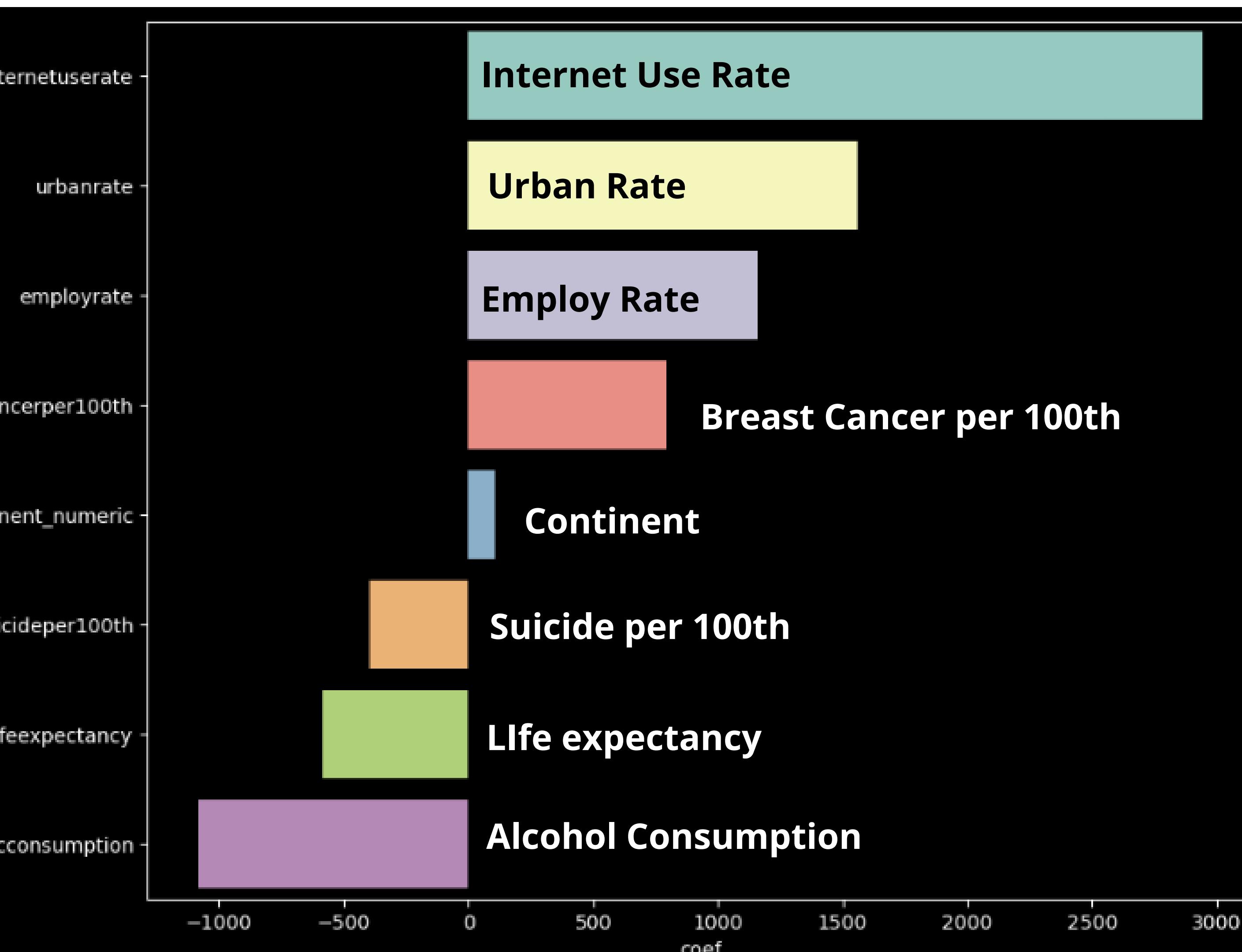
## Test

MAE: 2491

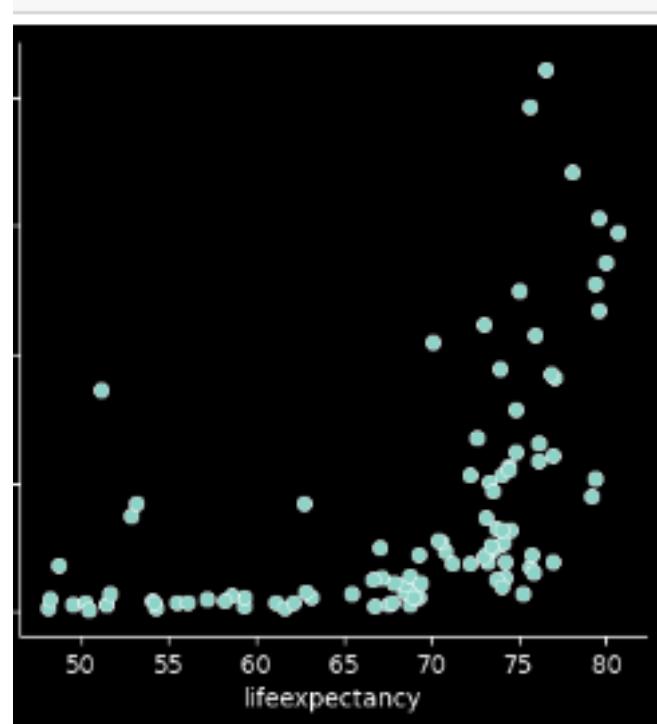
RMSE: 3372



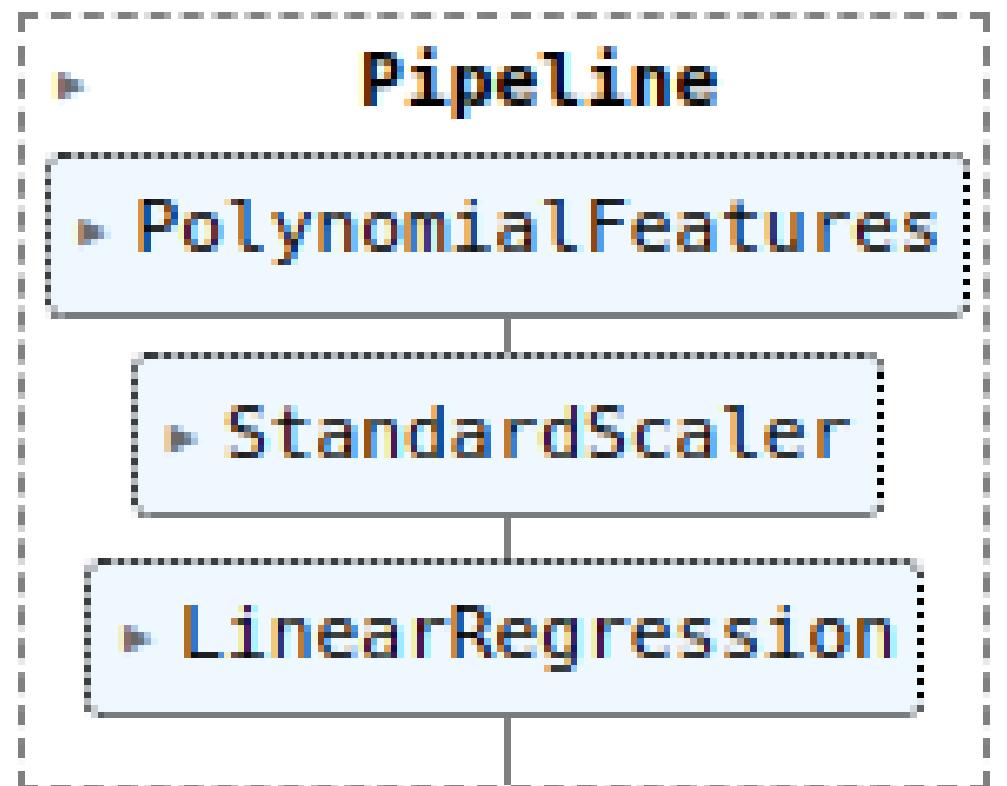
# COEFICIENTS



# MODEL CHOSEN



Some indicators are  
not lineal



# SECOND MODEL

R2: 0.86

## Training

MAE: 1102

RMSE: 1712

## Test

MAE: 2025

RMSE: 2984



# INSIGHTS

USING FIRST MODEL, WORST TO PREDICT BUT BETTER TO INTERPRETATE

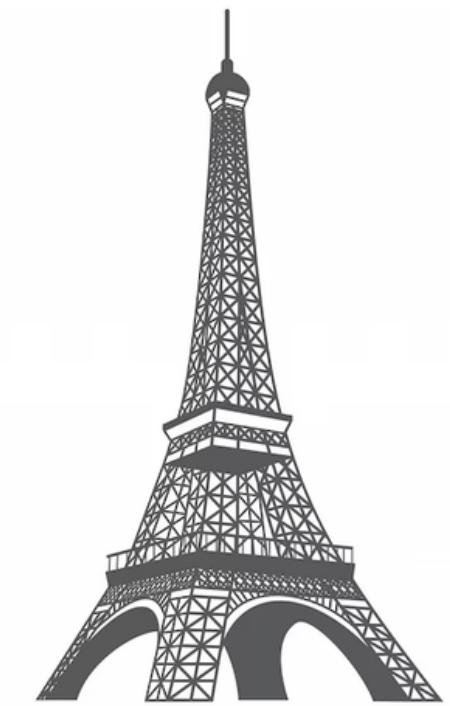




Employment Rate



Internet Use Rate



Urban Rate

**Internet usage rate, urbanization rate, and employment rate have the most significant impact on Gross Domestic Product (GDP). Countries that implement policies to increase these indicators tend to experience GDP growth.**



**Country's continent has a relatively minor influence on its GDP. This suggests that a high GDP is achievable regardless of geographic location.**



## Alcohol Consumption



## Number of Suicides

**Alcohol consumption and the number of suicides have a negative impact on GDP. Implementing policies to address these issues may also contribute to GDP growth.**

# POLICIES TO IMPROVE COUNTRY'S GDP





## **IMPROVE Internet Use Rate**

**Broadband Infrastructure Development:** Invest in building and expanding high-speed broadband infrastructure, especially in rural and underserved areas. Offer incentives for private sector participation to expand coverage.

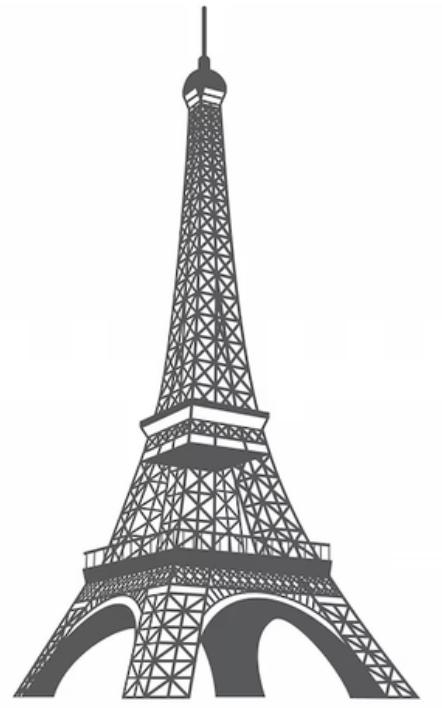
**Affordable Internet Access:** Promote policies that encourage competitive pricing for internet services, making them more affordable for a wider range of citizens.



## **IMPROVE Employment Rate**

**Skills Training and Education:** Invest in vocational training and education programs that align with the needs of the job market. Encourage lifelong learning to keep skills relevant.

**Labor Market Reforms:** Implement labor market reforms that make it easier for employers to hire and create flexible employment arrangements, while still protecting worker rights.



## **IMPROVE Urban Rate**

**Infrastructure Development:** Invest in urban infrastructure, including transportation, housing, and utilities, to accommodate urban population growth.

**Affordable Housing:** Develop affordable housing options to ensure that people of all income levels can live in urban areas.

**Public Awareness Campaigns:** Launch public awareness campaigns highlighting the risks of excessive alcohol consumption. These campaigns should target various demographics and age groups.

**Regulation and Taxation:** Implement stricter regulations on alcohol sales, such as raising the legal drinking age, restricting alcohol advertising, and increasing taxes on alcoholic beverages.



**ADDRESSING  
ALCOHOL CONSUMPTION**

**Mental Health Support:** Invest in mental health services and make them more accessible. Ensure that individuals in crisis can easily access professional help.

**Crisis Helplines:** Establish suicide prevention hotlines and crisis helplines with trained counselors available 24/7.

**Community-Based Interventions:** Develop community programs that focus on suicide prevention, including support groups, education, and awareness initiatives.



**REDUCING  
SUICIDES**

# THANK YOU

