# **Example of ML Project**

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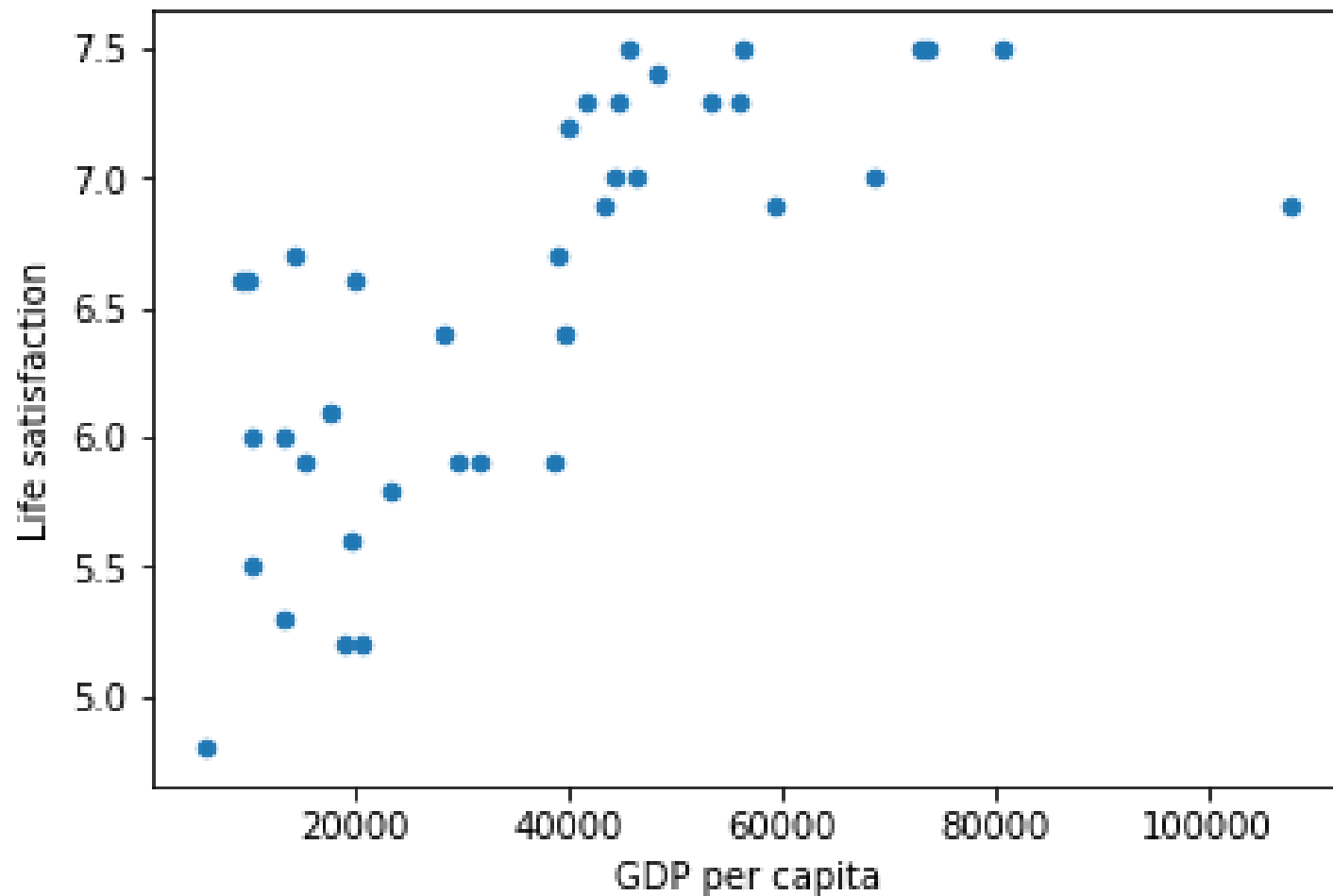
# Does Life Satisfaction Depends on Money?

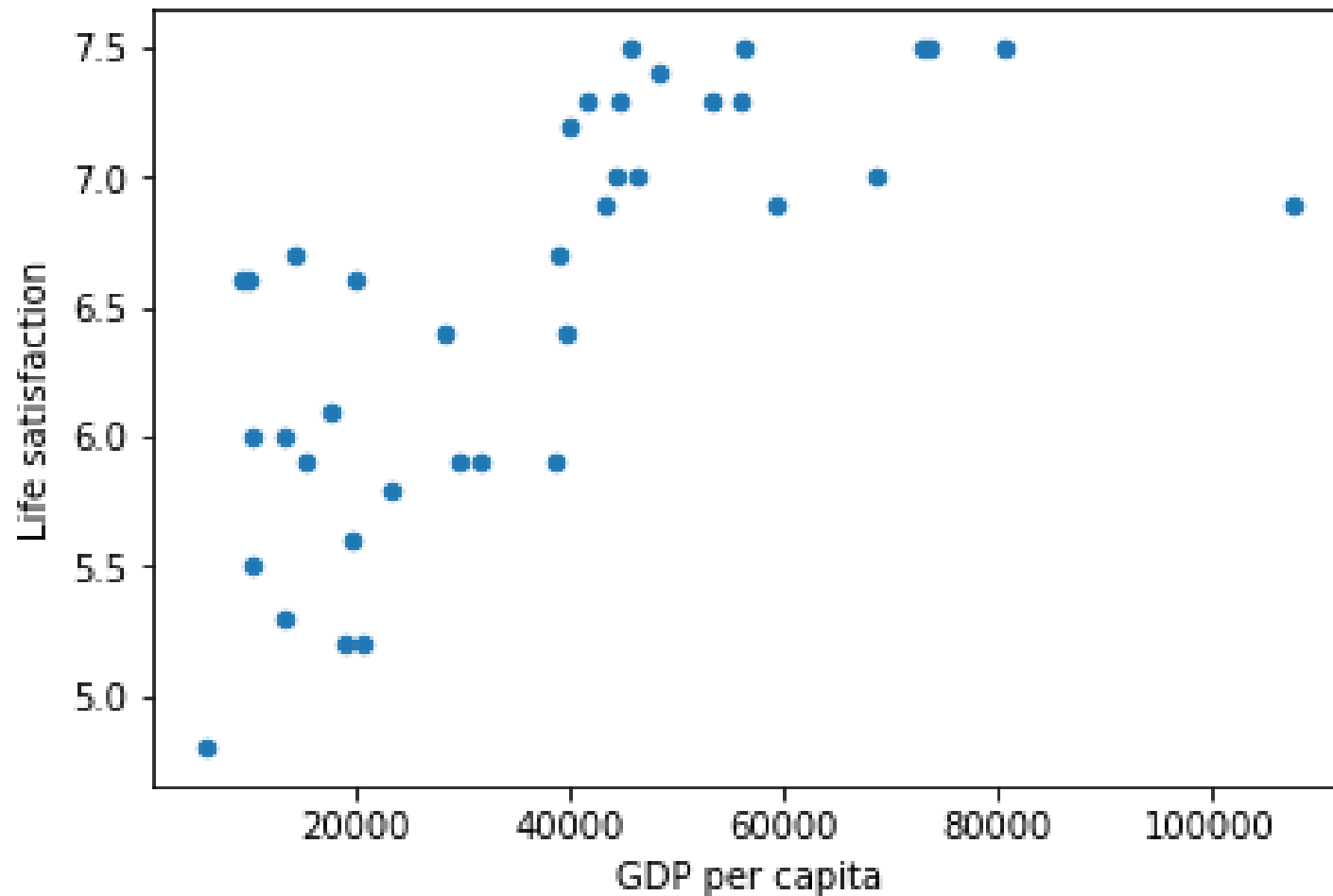| Country | GDP per capita | Life satisfaction |
|---|---|---|
| **South Africa** | 6089.224 | 4.8 |
| **Mexico** | 9249.265 | 6.6 |
| **Brazil** | 10019.790 | 6.6 |
| **Russia** | 10248.238 | 6.0 |
| **Turkey** | 10434.023 | 5.5 |
| **Poland** | 13429.414 | 6.0 |
| **Hungary** | 13459.733 | 5.3 |
| **Chile** | 14314.752 | 6.7 |
| **Latvia** | 15402.657 | 5.9 |
| **Slovak Republic** | 17491.098 | 6.1 |
| **Greece** | 18945.088 | 5.2 |
| **Estonia** | 19618.312 | 5.6 |
| **Czech Republic** | 19818.364 | 6.6 |

Source for GPD Data – International Monetary Fund

Source for Life Satisfaction Data – Organization for Economic Cooperation and Development
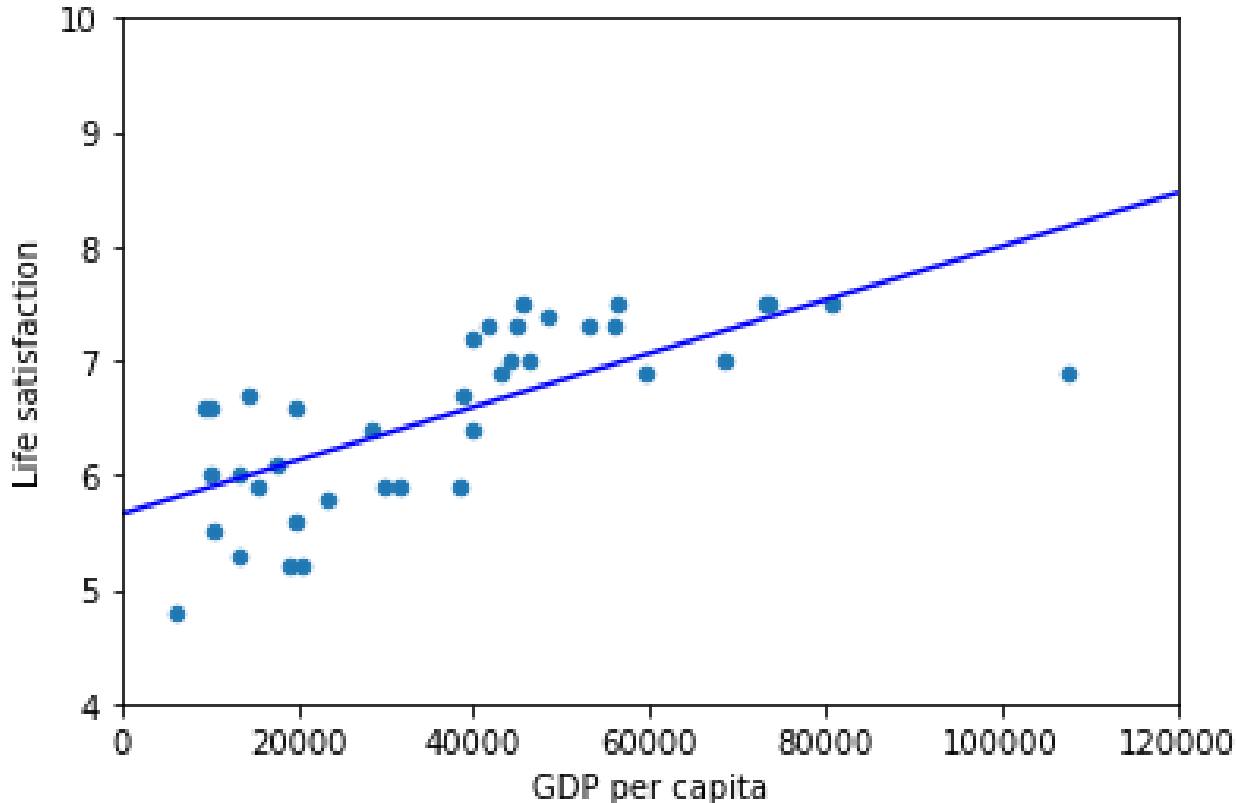
# Data Visualization

# How to Predict Life Satisfaction?

Hong Kong
GDP = 44999

# Linear Regression

$y = a * x + b,$
$a, b$ – parameters of the model

# k-Nearest Neighbors Algorithm

| United Kingdom | 38846.794 | 6.7 |
| --- | --- | --- |
| France | 39673.138 | 6.4 |
| Israel | 39974.340 | 7.2 |
| New Zealand | 41629.329 | 7.3 |
| Belgium | 43243.304 | 6.9 |
| Germany | 44184.445 | 7.0 |
| Canada | 44773.260 | 7.3 |
| Finland | 45692.892 | 7.5 |
| Austria | 46435.925 | 7.0 |
| Netherlands | 48271.668 | 7.4 |
| Sweden | 53248.143 | 7.3 |
| Australia | 56135.416 | 7.3 |

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# k-Nearest Neighbors Algorithm

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$$\frac{7.0 + 7.3 + 7.5}{3} = 7.27$$

# **Thank you!**