**Real Estate Market Analysis and Reporting- Integrating Data Scraping, Snowflake Database, Python, and Google Sheets**

**Project Overview:**

I will build a Data Analytics project using SQL, Python, and Google Sheets.

In this Data Analyst Portfolio project, we will scrape the Otodom website data using the Bright Data tool and then load the data into the Snowflake database. In the Snowflake database, we shall analyze, clean, and transform data and finally build reports to answer some of the most common questions related to the property market in Poland. For a couple of the tasks involving the transformation of data, we shall use Python and Google Sheets.

Part 1 - Scrape data, Load data and Flatten data using SQL.

Part 2 - Transform data using SQL, Python, and Google Sheets.

Part 3 - Analyze, Clean, and build reports using SQL.

**PART 1:**

Scrape data, Load data and Flatten data using SQL.

Steps followed in part1:

Understand the Otodom website.

Overview of Bright Data platform to scrape data.

Exporting dataset to Snowflake

Create and set up a new Snowflake account!

Install Snow SQL

Creating new database, warehouse, tables, stage, and file format

Copy data from stage to snowflake table

Understanding JSON data in Variant column

Flattening JSON to individual table columns

Deleting unwanted test data

**PART 2:**

Transform data using SQL, Python, and Google Sheets.

Steps followed in part2:

Setting up new Python environment

Python code to convert Latitude Longitude Coordinates to Address

Loading Address CSV file to Snowflake

Setting up API's in Google Developer Console to use Google Sheets

Convert Title language from Polish to English Step 1 Python to Sheets

Convert Title language from Polish to English Step 2 Sheets to Snowflake

Loading Title CSV file to Snowflake

**PART 3:**

Analyze, Clean, and build reports using SQL.

Steps followed in part3:

Looking at the 3 tables created so far in the project.

Build the final transform table.

Start building reports to solve problems related to the property market in Poland.