# Scope Document: Data-Driven Analysis for Importing Profitable Vehicles from Japan to the UK

## Objective:

To build a data-driven framework that helps identify the **most profitable and fast-moving vehicles to import from Japan to the UK**, considering cost-efficiency, market demand, and resale velocity. The goal is to make decisions based on publicly available data and auction data, minimizing guesswork and maximizing ROI.

## Key Questions to Answer:

1. Which vehicle makes and models are currently most popular and selling well in the UK?  
2. Which vehicles have the fastest turnaround (least time to sell) in the UK?  
3. What are the typical resale prices for these vehicles in the UK market?  
4. What is the cost of purchasing and importing the same vehicle from Japan (landed cost)?  
5. Which vehicles offer the best profit margins (UK sale price – total import cost)?

## Data Sources & Inputs

### 1. UK Market Data

Goal: Understand demand, sale price, and speed of sale.  
  
• AutoTrader, CarGurus, CarWow, Motors.co.uk  
 - Scrape listings to capture:  
 - Vehicle make, model, year  
 - Mileage  
 - Asking price  
 - Days listed (if available or can be tracked over time)  
 - Location and fuel type  
• GOV.UK (DVLA) or UK government vehicle statistics  
 - Use for:  
 - Vehicle registration volumes (new and used imports)  
 - Popular makes/models by region  
 - Ownership duration trends  
 - Emission compliance (e.g., ULEZ eligibility)

### 2. Japan Auction Data

Goal: Understand sourcing cost from Japan.  
  
• Access to Japanese auction platform (like USS or JU)  
 - Scrape or export:  
 - Sold prices  
 - Make/model/year  
 - Mileage  
 - Condition grades  
• Additional cost layers:  
 - Freight  
 - Export fees  
 - Inland logistics  
 - UK import taxes & VAT  
 - Conversion costs (e.g., speedometer, fog lights)

## Suggested Methodology

1. Data Collection Pipelines  
 - Automated scrapers for UK listing platforms (with periodic refresh to track sale durations)  
 - Integration with Japanese auction portal  
 - Periodic pull from government open datasets  
  
2. Data Analysis  
 - Frequency analysis: Which models appear most frequently in listings & registrations?  
 - Price spread analysis: Min–Max–Average resale values  
 - Turnaround time (track duration of live listings or use external reports)  
 - Cost calculation model: Include all import-related costs to get landed cost per vehicle  
 - Profitability mapping: UK resale value minus total import cost  
  
3. Scoring Model / Recommendation Engine  
 - Build a ranking system to highlight:  
 - Fast-selling vehicles  
 - High-margin vehicles  
 - Consistently high-demand models  
 - Suggest top 10–20 models per month/quarter based on real-time data

## Deliverables

• A central dashboard/report (Excel, Google Sheets, or basic web UI) showing:  
 - Most profitable models  
 - Fastest-selling vehicles  
 - Trends in pricing and demand  
• Scripts or pipelines to pull data regularly (optional)  
• Documentation of methodology and assumptions  
• Recommendations to expand or refine the process over time

## Next Steps

• Review feasibility of accessing required platforms  
• Estimate effort/time required for scrapers and analysis  
• Suggest tools/platforms to use (Python, Google Colab, BigQuery, Power BI, etc.)  
• Start with a proof of concept using limited vehicle categories (e.g., Hybrid SUVs)