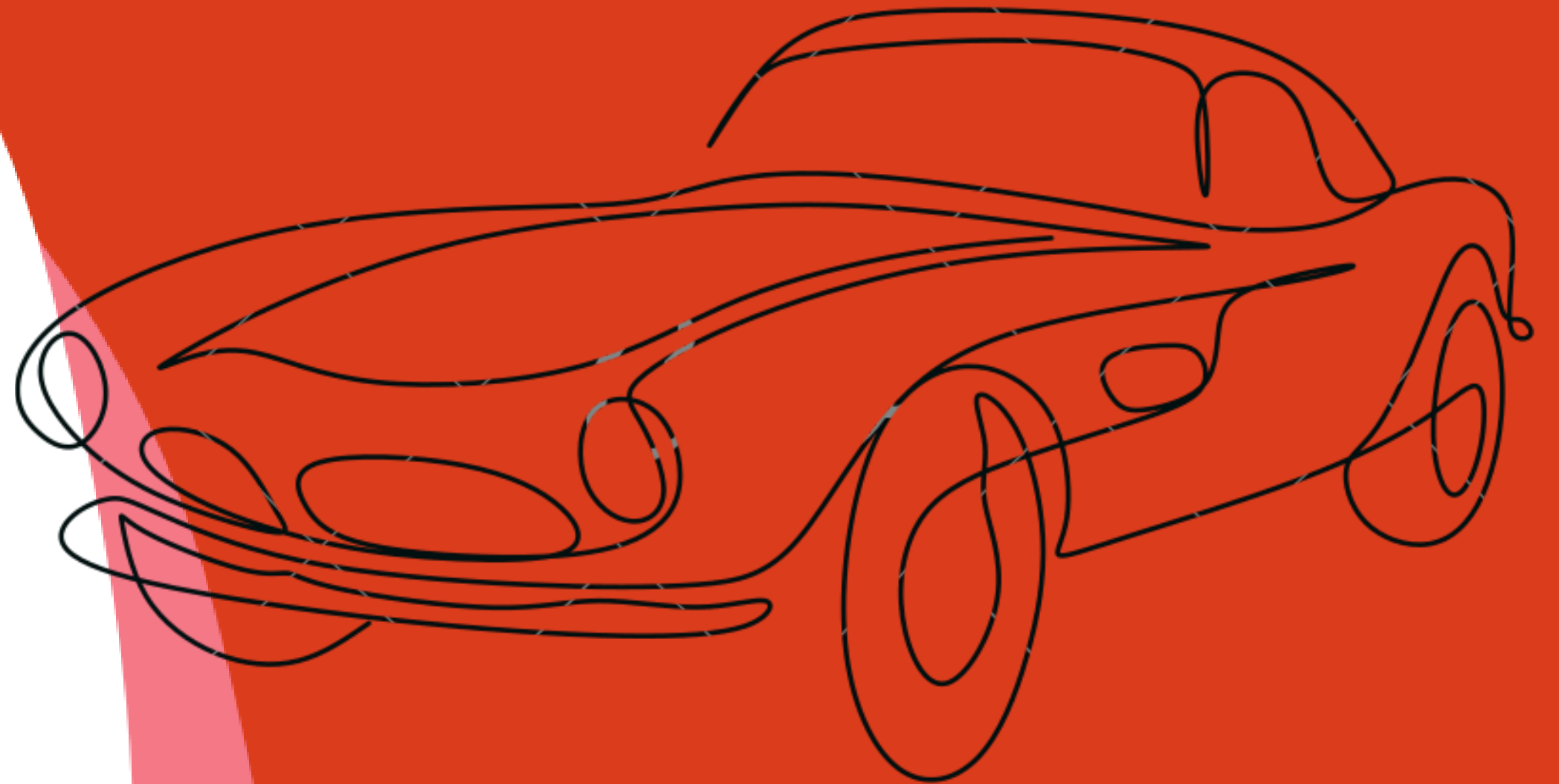


EXPLORING 2025 ELECTRIC VEHICLE

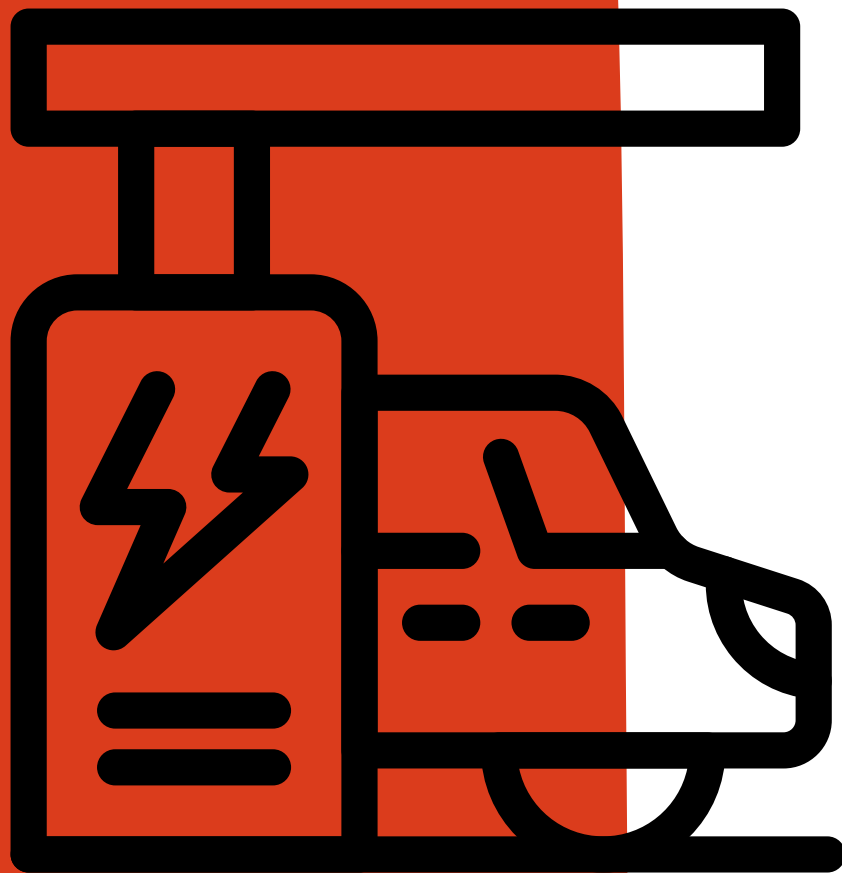
Gaining insight using IBM Granite

KEY TAKEAWAYS:

- Project Overview
- Insight & trends
- EV Persona & Recommendations
- Verdict

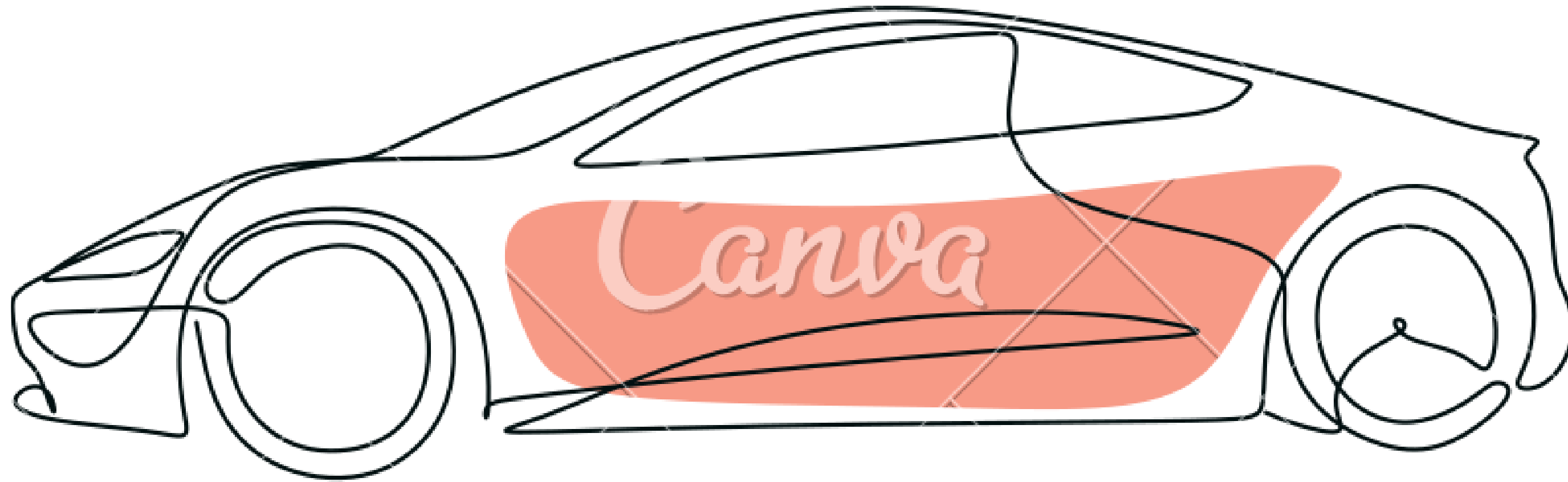


PROBLEMS



With an overwhelming number of EV options, the average consumer struggles to find the vehicle that truly fits their lifestyle. They might overspend on a car with a massive battery for a short daily commute, or buy a performance car when their main priority is cargo space for family trips.

GOALS

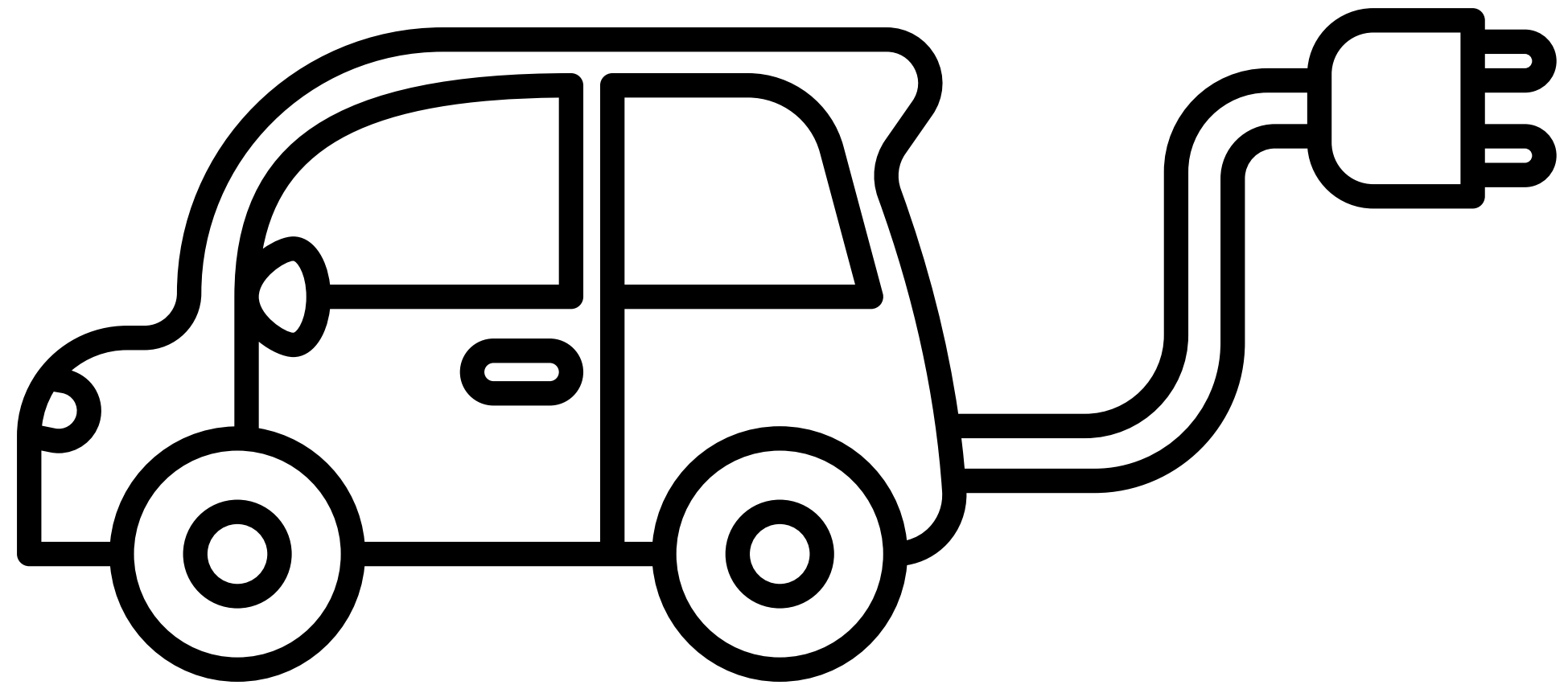


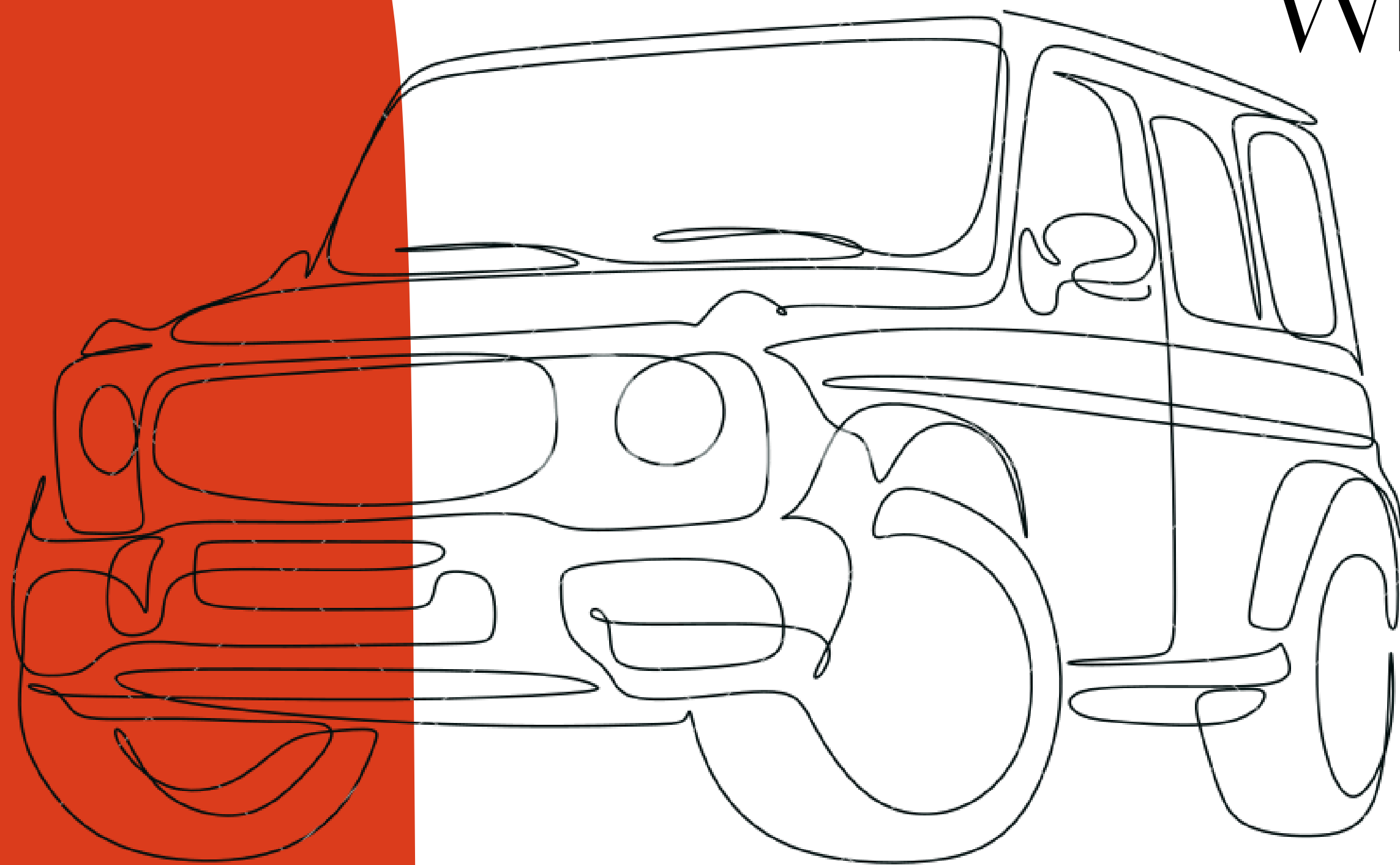
A practical guide or a simple recommendation tool that helps a potential buyer instantly narrow down their choices to a manageable and relevant list.

DATASET

Specs of 470+ electric cars: battery, range, charging, size & performance

This dataset provides a comprehensive collection of specifications and performance metrics for modern electric vehicles (EVs). It is designed to support researchers, analysts, students, and developers working on data science, machine learning, automotive market research, sustainability studies, or electric vehicle adoption analysis.





WHAT WE CAN LEARN FROM THIS DATA:

- Performance Comparison
- Battery Capacity vs Range
- Charging Speeds
- Manufacturer Strategies

INSIGHTS AND TRENDS

DIVERSE RANGE OF MODELS

The EV market now offers a wide variety of models, from compact city cars to luxurious SUVs and even performance-oriented vehicles.

EXPANSION INTO NEW SEGMENTS

There's an ongoing expansion of EV offerings in new segments, like luxury SUVs, high-performance sports cars, and even commercial vans.

INCREASING BATTERY CAPACITY

A noticeable trend is the gradual increase in battery capacities across different vehicle segments, allowing for greater ranges. For instance, compact cars now offer over 300 km (186 miles) of range, while larger SUVs can achieve up to 550 km (342 miles).

CHARGING INFRASTRUCTURE DEVELOPMENT

The growth of fast-charging networks worldwide has alleviated range anxiety concerns for many consumers.

IMPROVED PERFORMANCE

Many manufacturers are focusing on enhancing the performance characteristics of their EVs, such as acceleration and top speeds.

GROWING FOCUS ON EFFICIENCY

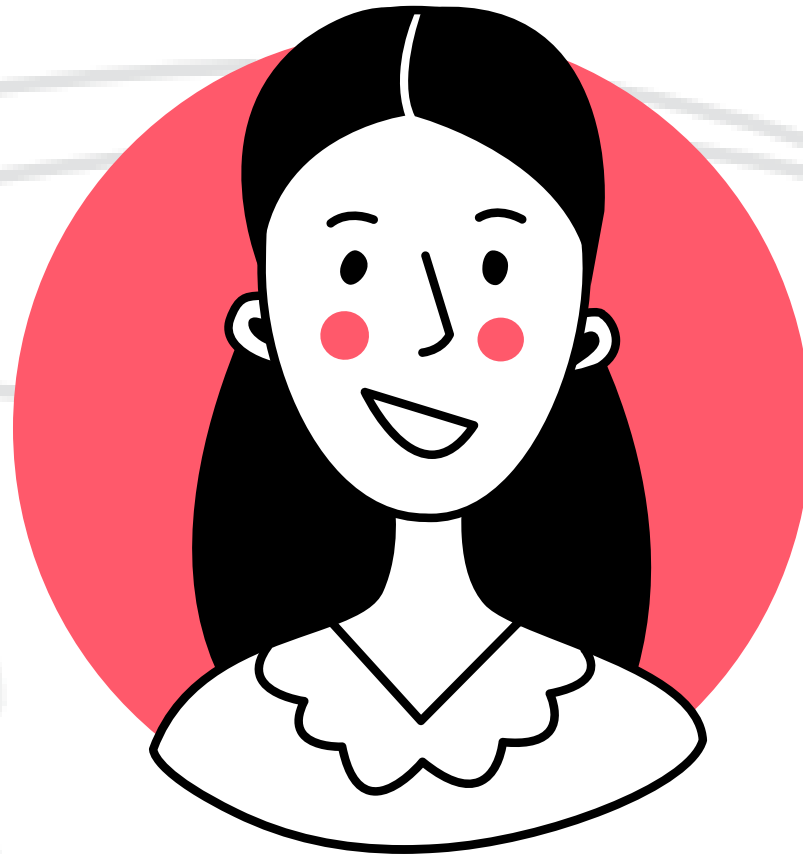
Manufacturers are paying increasing attention to energy efficiency, reflected by decreasing consumption rates (Wh/km) for similar ranges and performance levels.

EV PERSONA



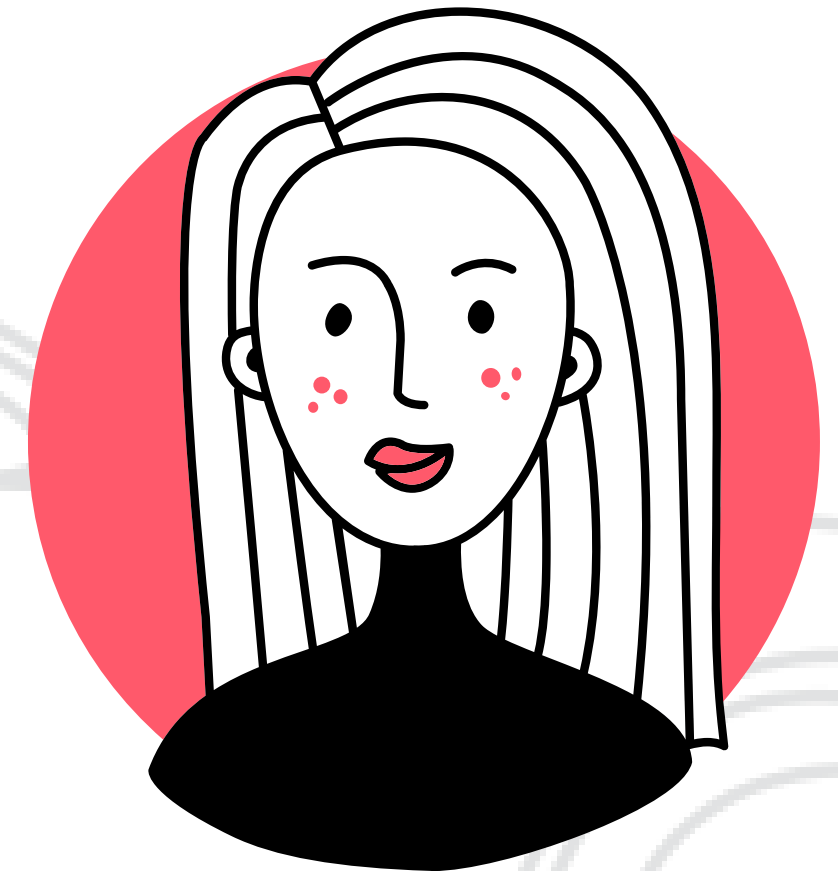
THE TECH ENTHUSIAST

High-performance specs, advanced technology features, and fast charging capabilities catering to those who value innovation and speed.



THE ECO-CONSCIOUS FAMILY

High battery capacity, spacious interior, and all-wheel drive for family-friendly adventures while minimizing carbon footprint.



THE URBAN PROFESSIONAL

Compact size, quick acceleration, and sleek design suited for city living with efficient range for daily commute.



THE TECH ENTHUSIAST

High-performance specs, advanced technology features, and fast charging capabilities catering to those who value innovation and speed.



Tesla Model X Plaid

This high-performance electric SUV boasts a top speed of 200 mph (322 km/h) and can accelerate from 0-60 mph (97 km/h) in just 1.9 seconds. Powered by a tri-motor setup, it delivers an impressive 1020 horsepower. It features advanced technology with autopilot capabilities, over-the-air software updates, and a 17-inch touchscreen display. Fast charging is available through Tesla's Supercharger network.



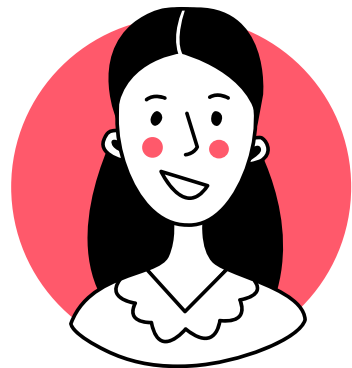
Porsche Taycan

The Taycan is an all-electric sports sedan from Porsche, known for its performance and luxury. It offers two motor options - rear-wheel drive (RWD) or dual-motor all-wheel drive (AWD). The AWD version can accelerate from 0-60 mph in as little as 2.6 seconds and has a top speed of 155 mph (250 km/h). It features advanced technology like Porsche Communication Management, a 10.9-inch touchscreen, and over-the-air updates. Fast charging is possible with its 800V architecture, which supports up to 270 kW charging.



Lucid Air Dream Edition

This luxury electric sedan offers a staggering 1,080 horsepower from its tri-motor setup and can accelerate from 0-60 mph in just 1.9 seconds. With a top speed of 230 mph (370 km/h), it's one of the fastest production cars. The Air Dream Edition features an advanced 19" x 10" front and rear touchscreens, a 54-inch curved glass display, and Level 3 autonomous driving capability. Fast charging is supported through DC Fast Charging up to 250 kW, which can add up to 200 miles (322 km) of range in just 20 minutes.



THE ECO-CONSCIOUS FAMILY

High battery capacity, spacious interior, and all-wheel drive for family-friendly adventures while minimizing carbon footprint.



Volvo XC40 Recharge P8 AWD

This electric SUV offers high eco-friendliness with its 78 kWh battery capacity, providing a range of approximately 250 miles (EPA estimated). It features an all-wheel-drive system for safe and capable family adventures. The interior provides ample space for passengers and cargo.



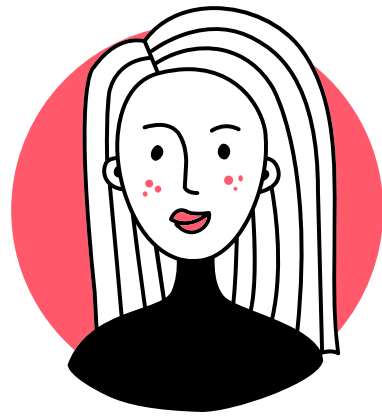
Audi e-tron Sportback

With a battery capacity of 95 kWh, this electric SUV offers an EPA-estimated range of up to 222 miles. Its spacious interior and all-wheel drive make it suitable for family use while minimizing environmental impact.



Tesla Model Y Long Range AWD

The Model Y offers a large, spacious interior suitable for families and comes with an all-wheel drive system for enhanced performance and safety. Its 75 kWh battery provides an estimated range of up to 326 miles (EPA).



THE URBAN PROFESSIONAL

Compact size, quick acceleration, and sleek design suited for city living with efficient range for daily commute.



Citroen e-C4 X

This compact sedan has a battery capacity of 102 kWh and offers an estimated range of 335 km (WLTP). It delivers 136 horsepower and 260 Nm of torque, providing quick acceleration for city driving. The CCS fast-charging capability allows it to reach 80% charge in about 30 minutes. Its sleek design and efficient range make it suitable for urban professionals prioritizing compact size, acceleration, and daily commute efficiency.



Volkswagen ID.3 Pro S

The ID.3 Pro S is a compact hatchback with a battery capacity of 288 kWh and an estimated range of 543 km (WLTP). It offers 180 hp and 295 Nm of torque, ensuring quick acceleration for city maneuvers. Its fast-charging capability via CCS allows it to reach 80% in approximately 30 minutes. The ID.3 Pro S combines compact size, efficient range, and swift acceleration for urban professionals.



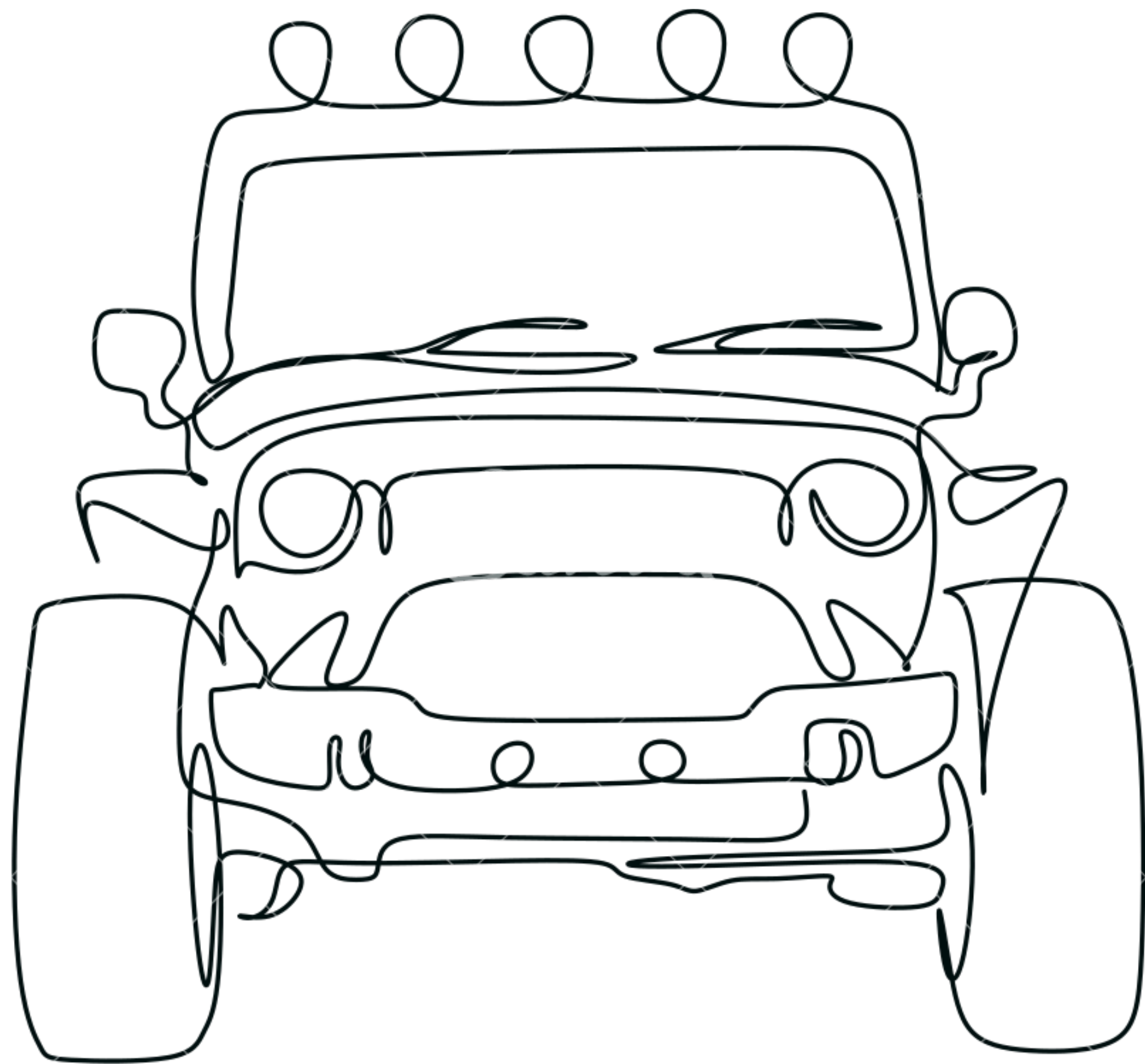
Citroen e-SpaceTourer M

This compact van is designed for urban professionals requiring space without compromising on efficiency and style. It comes with a 102 kWh battery, offering an estimated range of 260 km (WLTP). The e-SpaceTourer M delivers 134 hp and 290 Nm of torque, providing enough power for city driving while maintaining agility in tight spaces. Its fast-charging capability via CCS allows it to reach 80% charge in about 30 minutes.

YOUR PERFECT EV IS IN THE DATA

The electric vehicle market of 2025 is no longer a niche corner of the automotive world; it's a vast and complex ecosystem with an option for nearly every type of driver. Our analysis proves that while the sheer number of choices can feel overwhelming, this diversity is actually the market's greatest strength.





TAKEAWAY

There is no
single "best"
electric car,
there is only the
best electric car
for you.

POTENTIAL ENHANCEMENTS/ANALYSIS

The Missing Piece: Price Data

Our current analysis successfully identifies the top-performing EVs for different needs. However, the most critical factor in a consumer's decision, price, is missing. This prevents us from moving beyond a technical comparison to a true value-for-money analysis.

Deeper Analysis Unlocked by Price Data:

By plotting features like Range vs. Price, we could visually identify underserved segments. For example, we might find a gap for EVs offering >450km of range below a specific price point—a powerful insight for a manufacturer looking to enter a new niche.

Value-Driven Metrics: We could create compelling new metrics to quantify value, such as:

- Cost per Kilometer of Range
- Cost per Second of Acceleration
- Cost per Liter of Cargo Space

Price data would allow us to accurately map the market, clearly distinguishing between budget, mid-range, and premium offerings and understanding each brand's true competitive position.

AI SUPPORT ACKNOWLEDGMENT

This project was developed in collaboration with a generative AI, which served as a key partner throughout the analytical process.

The AI's contribution was instrumental in several key areas:

- Initial Data Interpretation: The AI provided a rapid and comprehensive overview of the `electric_vehicles_spec_2025.csv` dataset, outlining its structure, key variables, and potential applications.
- Ideation and Problem Framing: The AI acted as a brainstorming partner, helping to transform a broad idea ("too many EV choices") into a concrete, data-driven project by proposing several analytical frameworks, including the "Perfect EV Profile" concept.
- Persona Development and Analysis: The AI executed the core analysis by defining distinct consumer personas and applying data-driven filters to the dataset to generate tailored vehicle recommendations for each group.
- Content and Narrative Generation: The AI assisted in articulating the project's findings, drafting the final verdict, and creating structured content for the presentation slides.

The use of AI accelerated the project timeline and enriched the analysis by providing immediate, structured, and relevant data processing and content generation.



ASYAM YAFI MAULANA

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We'd love to talk about cars and data

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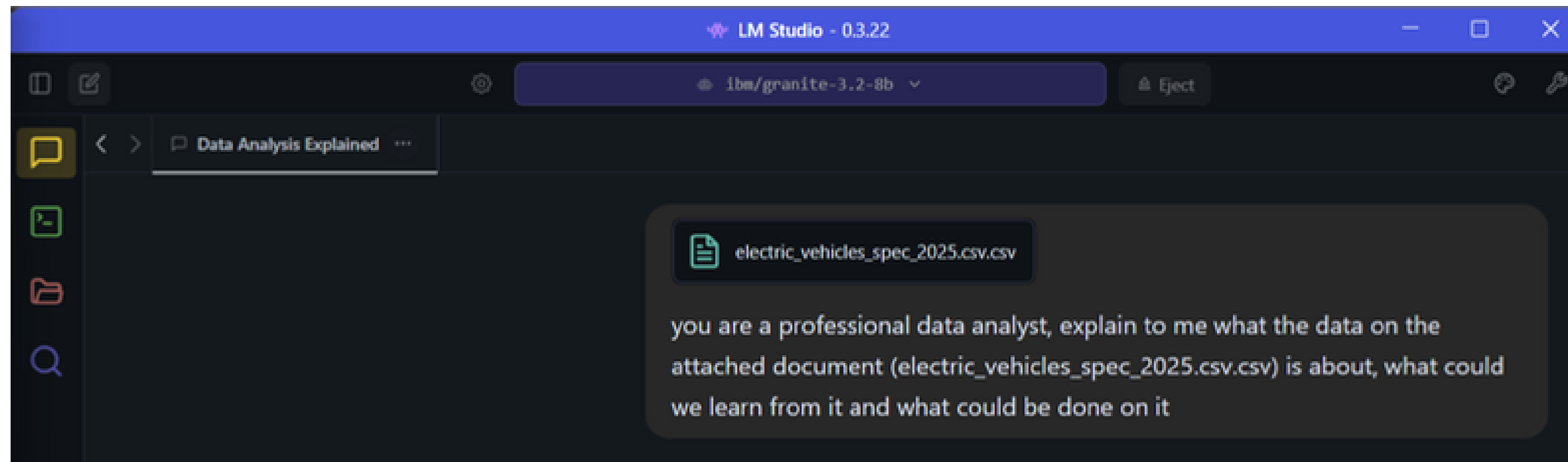
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APPENDIX : IBM GRANITE USAGE

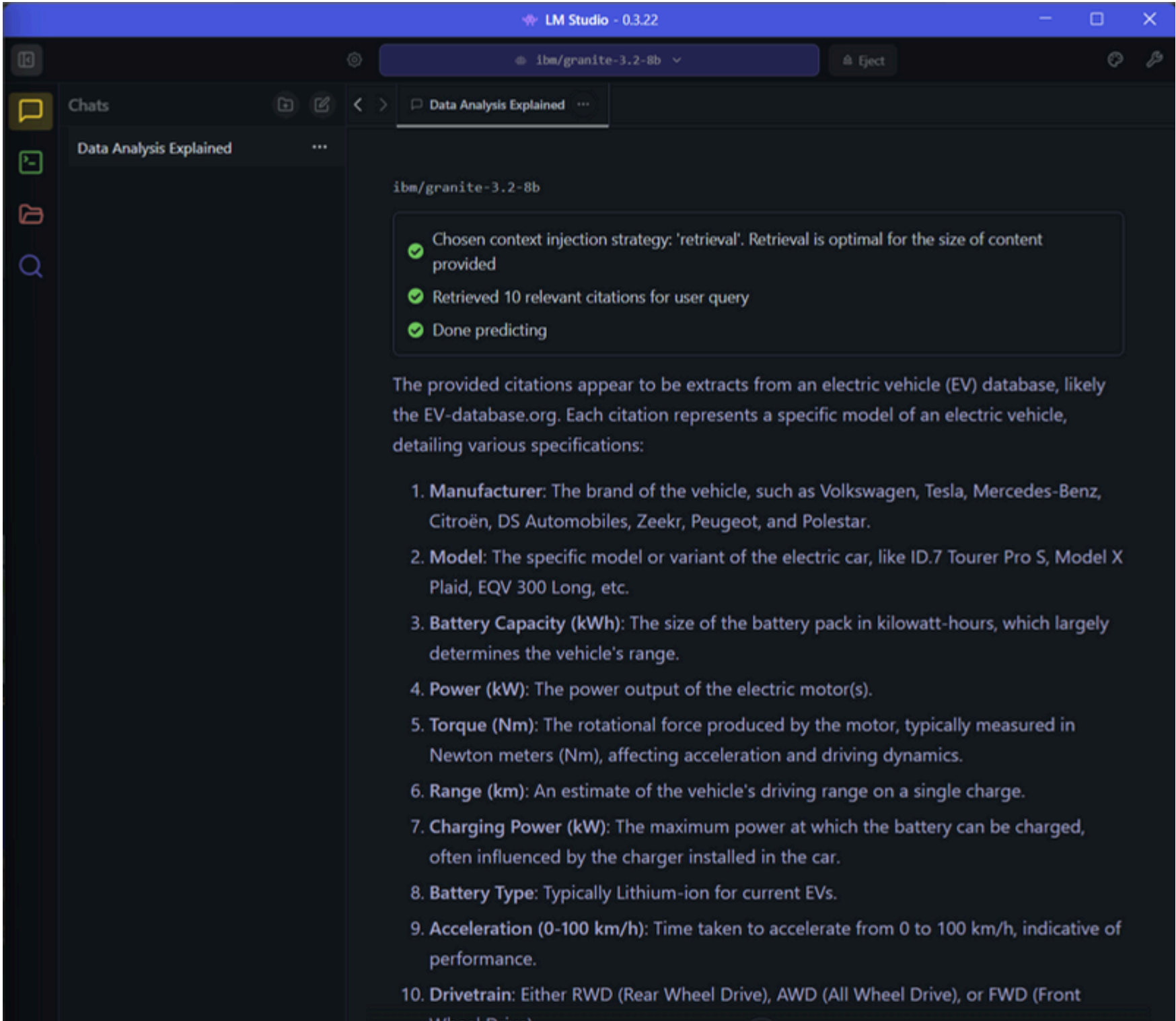
TOOLS : LM STUDIO 0.3.22; MODELS : IBM GRANITE 3.2 8B; ADDITIONAL SETTINGS, CONTEXT LENGTH : 20056



THE PROMPT (SNIPPETS)

APPENDIX : IBM GRANITE USAGE

TOOLS : LM STUDIO 0.3.22; MODELS : IBM GRANITE 3.2 8B; ADDITIONAL SETTINGS, CONTEXT LENGTH : 20056



FULLTEXT (JSON) AVAILABLE ON GITHUB :

[HTTPS://GITHUB.COM/YAFINEWBIE/EXPLORING-2025-ELECTRIC-VEHICLE](https://github.com/YAFINEWBIE/EXPLORING-2025-ELECTRIC-VEHICLE)

THE ANSWER (SNIPPETS)