Background

In this project, I play the role of a Data Analyst for an electric vehicle (EV) company. The company wants to understand recent trends in the global EV market and forecast future market trends, in order to identify potential opportunities. I aim to answer these guiding questions:

- What regions or countries have been driving the growth of EV sales in recent years?
- Has the EV market been dominated by certain modes or powertrains?
- If trends continue, what opportunities might exist for an EV company to capture value in the next 10 years?

Findings

From 2010 to 2023, the global EV market was dominated by sales in Asia (59%), Europe (27%), and North America (13%). Sales in China increased dramatically starting in 2020, allowing the country to emerge as the clear leader with more than 23 million vehicles sold over the 14-year period (55% of the global total). The United States came in a distant second (11%) followed by Germany (7%), France (4%), and the United Kingdom (4%). The vast majority of vehicles sold were cars (95%) rather than other modes like buses, trucks, or vans. 71% of vehicles sold were battery electric (BEV) and 29% were plug-in hybrids (PHEV).

If recent trends continue, I project the gap in EV sales between China and the rest of the world to widen, as sales reach more than 20 million vehicles per year in China by 2033. The United States would come in second with over 3 million EV's sold per year, while Germany, France, and the United Kingdom would each reach between 1 and 2 million. Meanwhile, I project the relative market share between BEV's and PHEV's to remain fairly stable, with PHEV's perhaps making modest gains. By 2033, the global market could be about two-thirds BEV's and one-third PHEV's.

Conclusion

Findings suggest the most future opportunities for EV’s exist in the Chinese market. However, while comparatively much smaller, sizeable markets may continue to develop in the United States and Europe. In terms of powertrain, opportunities should persist in both BEV’s and PHEV’s.