



Chargers and EV Analysis

Data Engineering Project

Data

	betreiber	art_der_ladeeinrichtung	anzahl_ladepunkte	anschlussleistung	steckertypen1	steckertypen2	steckertypen3	steckertypen4	p1_kw	p2_kw	...	kreis_kreisfreie_stadt	ort	postleitzahl	strasse	hausnummer	adresszusatz	inbetriebnahmedatum	koordinaten
0	Energiedienst Holding AG	Normalladeeinrichtung	2	44,0	AC Steckdose Typ 2, AC Schuko	AC Steckdose Typ 2	None	None	22,0	22,0	...	Landkreis Breisgau-Hochschwarzwald	Schallstadt	79227	Waldseemueller-Str.	1	None	2019-07-04	47.96147, 7.7568
1	EG	Normalladeeinrichtung	2	22,0	AC Steckdose Typ 2	AC Steckdose Typ 2	None	None	22,0	22,0	...	Landkreis Breisgau-Hochschwarzwald	Vogtsburg-Achkarren	79235	Schlossbergstraße	2	None	2021-02-16	48.0675816, 7.6245483
2	Energiedienst Holding AG	Normalladeeinrichtung	2	44,0	AC Steckdose Typ 2, AC Schuko	AC Steckdose Typ 2	None	None	22,0	22,0	...	Landkreis Breisgau-Hochschwarzwald	Ehrenkirchen	79238	Herrenstrasse	11	None	2020-05-01	47.923458, 7.740389
3	Privatperson	Normalladeeinrichtung	1	11,0	AC Steckdose Typ 2	None	None	None	11,0	NaN	...	Landkreis Breisgau-Hochschwarzwald	Münstertal	79244	Kirchweg	4	None	2021-10-04	47.8603276, 7.7995297

Datasource #1 : Deutschland: E-Ladesäulen
<https://mobilithek.info/offers/-2989425250318611078>

	state	total_vehicle	total_alternative	alternative_drive_percentage	total_electric_engine_vehicle	electric_percentage	electric_vehicle	hydrogen_cell_vehicle	plug_in_hybrid_vehicle	total_hybrid_engine_vehicle
0	Baden-Württemberg	161602	81814	50.6	40474	49.5	27750	11	12713	40709
1	Bayern	239012	106875	44.7	44173	41.3	32688	35	11450	61800
2	Berlin	33056	16733	50.6	6349	37.9	4758	10	1581	10263
3	Brandenburg	19324	8616	44.6	3845	44.6	2864	1	980	4604
4	Bremen	7180	3729	51.9	1464	39.3	1001	-	463	2229
5	Hamburg	36806	16721	45.4	5317	31.8	3915	4	1398	11254
6	Hessen	126125	52320	41.5	25907	49.5	16841	3	9063	25904

Datasource #2 : Neuzulassungen von Kraftfahrzeugen mit alternativem Antrieb (FZ 28) im Jahr 2023
<https://mobilithek.info/offers/573357313572614144>

	Land name	Kreis name
	<input type="text" value="Search column..."/>	<input type="text" value="Search column..."/>
1	Saarland	Landkreis Neunkirchen
2	Bayern	Landkreis Rhön-Grab...
3	Niedersachsen	Landkreis Diepholz
4	Niedersachsen	Landkreis Uelzen
5	Hessen	Landkreis Limburg-W...
6	Hessen	Landkreis Werra-Mei

Datasource #3 : Kreise - Germany
<https://public.opendatasoft.com/explore/dataset/georef-germany-Kreis/>

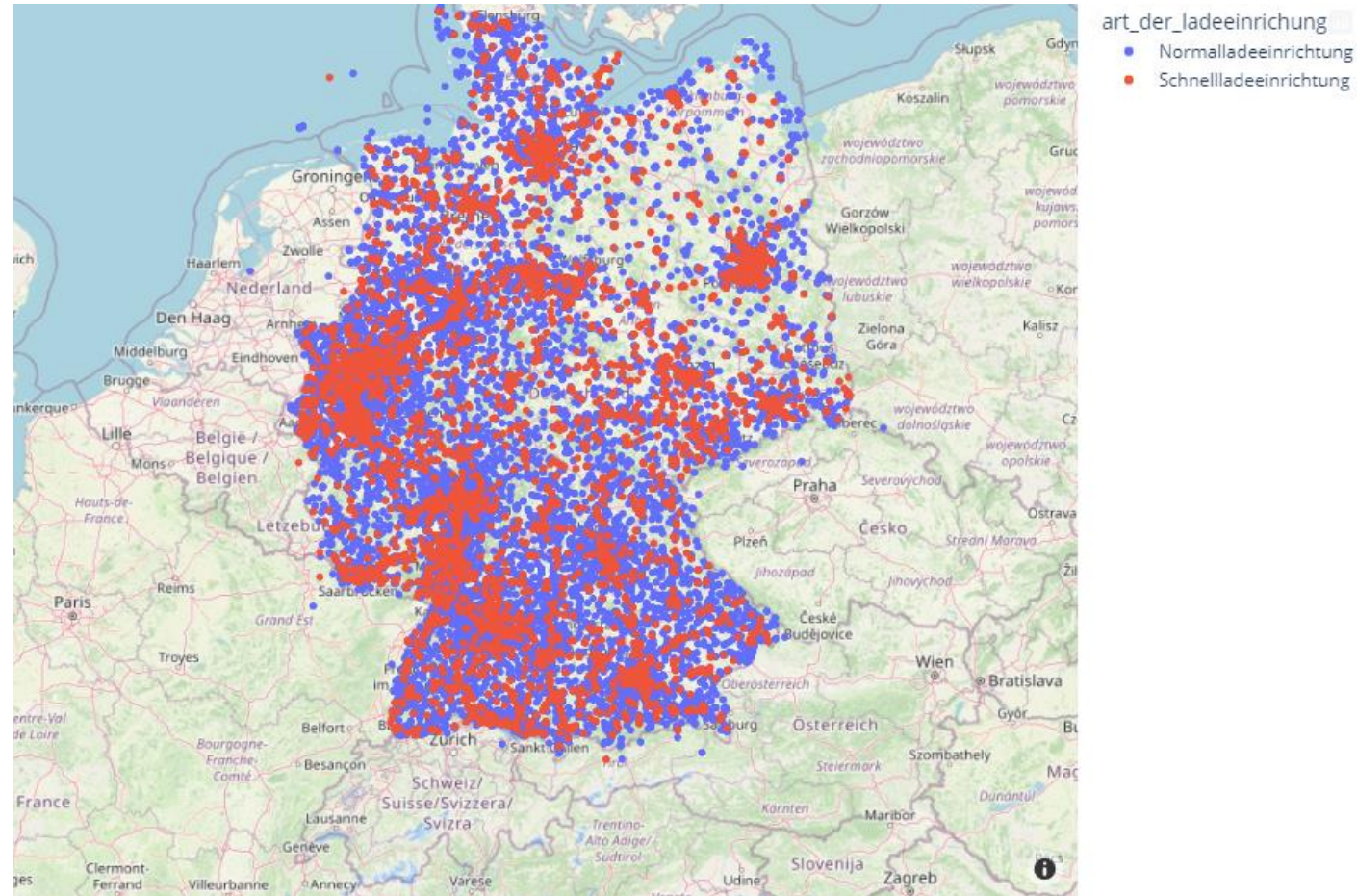
• The Question •

Which state of Germany that needs improvement in EV Charging facilities?



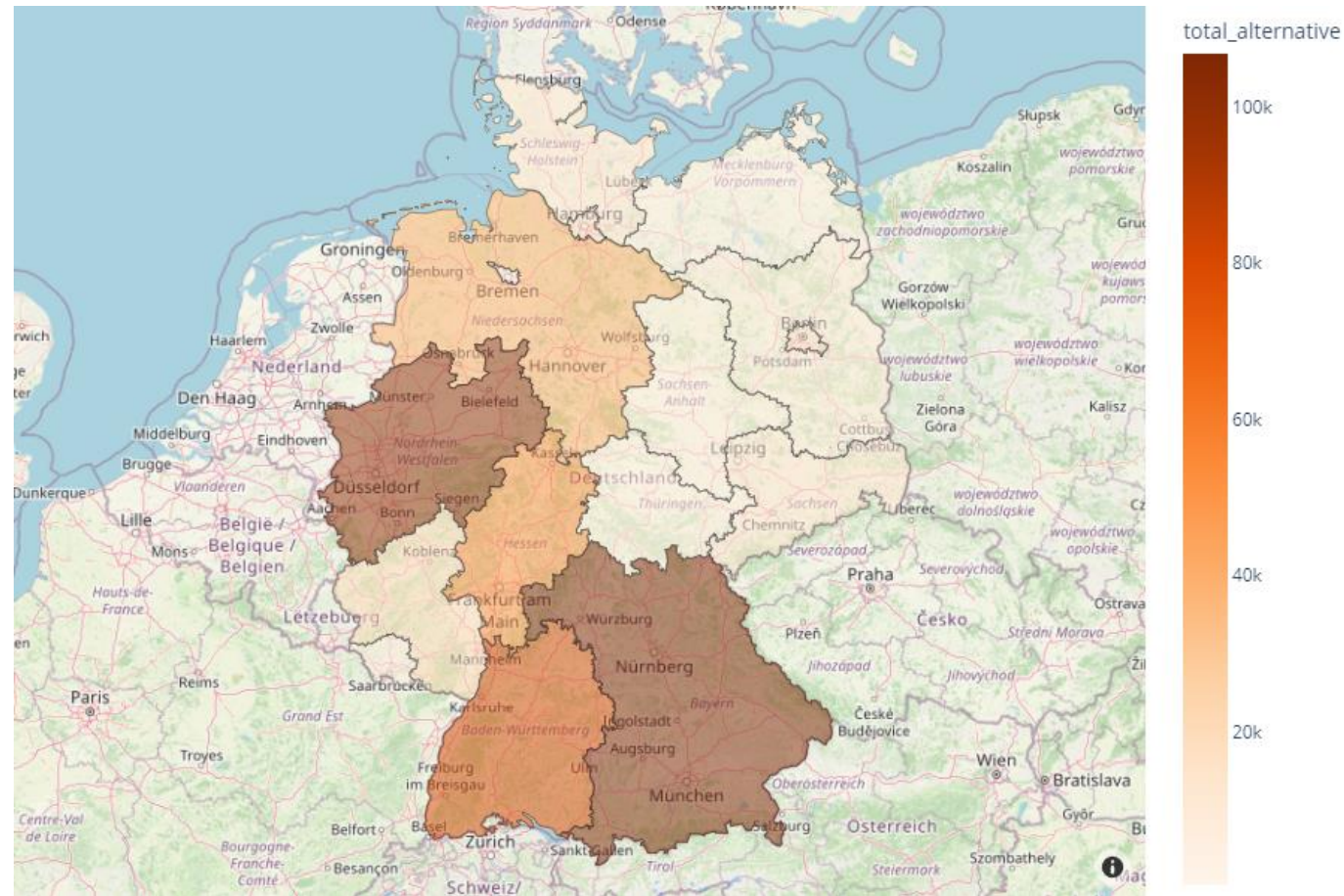
<https://uk.mer.eco/news/germany-ev-charging-infrastructure/>

Where are the EV Chargers in Germany?



The data suggests that the chargers clustered mostly in southern Germany, except for big cities like Hamburg or Berlin

• How many newly registered alternative vehicles in each state? •

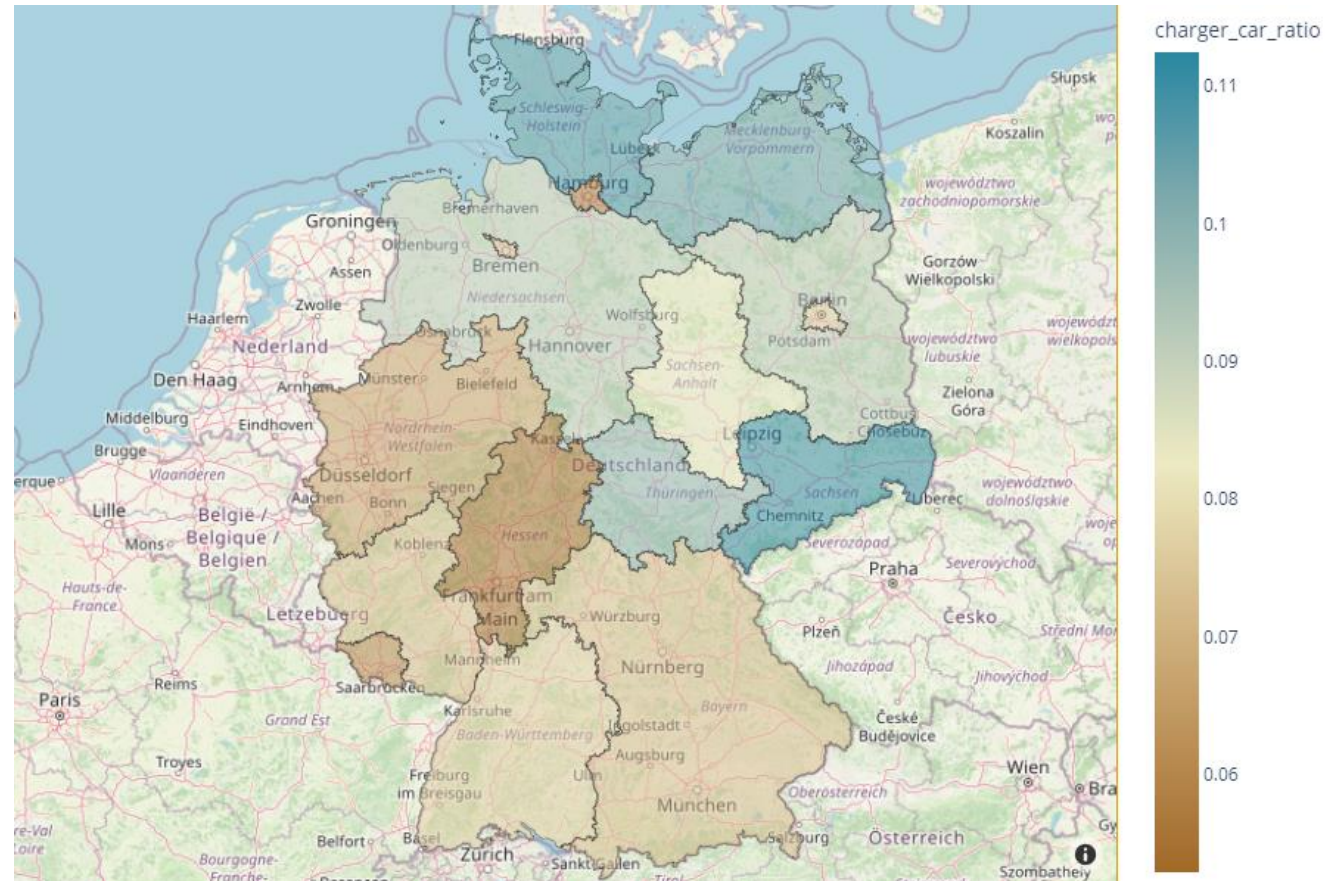


A notable trend is observed in southern Germany with a significant increase in newly registered electric vehicles (EVs), indicating a higher rate of EV adoption compared to the northern region.

• What about chargers per state? •



Chargers per vehicle in Germany



In southern Germany, there is a scarcity of chargers for electric vehicles, making a possibility of inconvenience to own or travel with an EV due to more probable occupied charging stations.



Thank You

Questions?