Many of the compendium studies are beyond the scope of a 1-month project or have irrelevant topics (to cars/transportation, GM’s goals, etc.). Most of the relevant studies and their short descriptions are summarized here!

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| Chapter | Studies and Descriptions |
| 2 | 3- section 3, EV charging load considering occupant travel behavior  4- statistical model, lightweighting, perceived costs/adoption, driving patterns- see appendix for datasets  5- battery swaps versus charging  6- charging, renewable energy   * <https://midcdmz.nrel.gov/apps/sitehome.pl?site=BMS> (energy)   8- charging infrastructure and demand- can’t find EV charge start and end times in stated NHTS dataset  13- ev battery lifespan formula, applications to NHTS based on trip/person travel patterns and temps  15- power demand and charging prediction with machine learning   * [https://ev-database.org/#sort:path~type~order=.rank~number~desc|range-slider-range:prev~next=0~1200|range-slider-acceleration:prev~next=2~23|range-slider-topspeed:prev~next=110~350|range-slider-battery:prev~next=10~200|range-slider-towweight:prev~next=0~2500|range-slider-fastcharge:prev~next=0~1500|paging:currentPage=0|paging:number=9](https://ev-database.org/#sort:path~type~order=.rank~number~desc%7Crange-slider-range:prev~next=0~1200%7Crange-slider-acceleration:prev~next=2~23%7Crange-slider-topspeed:prev~next=110~350%7Crange-slider-battery:prev~next=10~200%7Crange-slider-towweight:prev~next=0~2500%7Crange-slider-fastcharge:prev~next=0~1500%7Cpaging:currentPage=0%7Cpaging:number=9) * Behavior from trip data in NHTS- motivations, start/end times, parking   16- distance needs and requirements for EVs   * Commute Atlanta dataset can’t find but NHTS could be substituted maybe   19- Charging load with Monte Carlo- can’t find exact load data used though  21- Charging load distribution prediction- find data  22- EV perceptions and manufacturing trade offs  25- load prediction and simulations, output power- uses NHTS and derives data for new features like charging times and photovoltaic power  26- charging load with NHTS and Monte Carlo, takes into account location, so maybe relates to congestion  31- Gasoline super users as target for EVs marketing and transitions   * Consumption from NHTS data, income for feasibility of transition to electric   34- congestion, routing, and EV efficiency (first part of the study)   * Need to ask for data, so probably not available publicly   36- charge load balancing through schedule optimization   * NHTS and EV database- can’t find actual database   38- cost-emission tradeoffs, coordinated charging and scheduling  39- charging price and scheduling optimization for load  40- charging load  42- battery degradation  43- selective emissions reduction by targeting certain engines  44- EV adoption household characteristics  46- charging load and optimization  49- transportation and power stresses- uses Greensboro so can apply to other areas  51- dynamic charging prices to alleviate congestion  53- vehicle-to-grid power optimization  55- charging demand based on household, availability optimization  56- charging load and energy demand based on travel factors  57- charging policies for power optimization |
| 3 | 3- market and policy impacts and benefits on EV adoption and perceptions   * Data in appendices? confirm   4- NHTS emissions derivations for autonomous vehicles |
| 5 | 3- environment features on travel choice- can be used for marketing for vehicles   * NHTS and ACS survey data * <https://data.census.gov/table?q=acs&y=2022> not sure how to find raw data, everything is aggregated into tables * <https://lehd.ces.census.gov/data/> origin-destination datasets   6- clustering of trips for socio-demographics for travel mode preferences- marketing to vehicle users? |
| 6 | 11- only provides an overview of technology interventions, make an actual study on crashes- maybe focus on teen driving behavior?   * <https://www.nhtsa.gov/nhtsa-datasets-and-apis> car brand ratings for crashworthiness from federal agency, complaints and defects for vehicle safety   15- apply ownership of cars methodology to EVs |
| 7 | 7- Prediction prices, seems like beginner-friendly topic   * Exact dataset not found and contains other features not in NHTS   19- vehicle miles driven, forecast patterns among location/other factors  20- ridesharing factors, users, demographics   * Used Populus dataset, but private company requires payment for access probably |
| 8 | 2- crash risk and severity factors of individuals, environment, and road conditions   * uses public databases, but not shown how data was scraped |
| 10 | **12- EV travel use frequency/miles compared to regular cars using NHTS, explores different types of EVs**  13- ridesharing, idle vehicle use, NHTS  20- ridesharing factors and adoption/travel patterns   * <https://data.cityofchicago.org/Transportation/Transportation-Network-Providers-Trips-2018-2022-/m6dm-c72p/about_data> Chicago b/c more detailed than NHTS |
| 11 | **9- EV rebates, consumer demographics in comparison to regular cars**   * NHTS and EV consumer data from California * <https://cleanvehiclerebate.org/en/survey-dashboard/ev>   13- EV perceptions and innovations- made own survey, but raw data doesn’t seem available |
| 12 | 1- pick-ups and drop offs for shared autonomous vehicles   * Pricing and congestion/fleet size and density on ridership in simulations * Austin specific parking data and NHTS user characteristics used |

Useful Database for EV Model Statistics :

* <https://ev-database.org/cheatsheet/range-electric-car>