

SIH 2020

VMware

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Background

Why is this important and context?

EV will be the vehicle of choice soon

EVs adoption varies across vehicle types – 2W, 3W, passenger cars

Multiple favorable factors (currently 8000 EVs on Indian roads) in Indian context

- Manufacturing push – Mahindra, Tata, Hyundai
- Policy support – India EV policy is under development; Charging stations specifications released
- Costs of technology falling
- Greater public acceptance

Problem Statement

What are we trying to solve?

Problem Statement

- EV demand on the grid is unknown
 - How much will be EV electricity demand on the grid?
 - Is the grid ready?
- EV users have range anxiety
 - How can EV users overcome range anxiety?
 - Can technology make charging infrastructure interoperable?

How can we solve this problem?

- Can we build an EV ecosystem and connect all players of the eco system?
- Can we create predictive models for EV demand?
- How do we provide inter operability of data and end user applications

Possible Considerations

Collect data from multiple sources and enable user-end applications

Develop models for analytical insights such as EVs load demand on local/regional grid

Research

<https://www.startus-insights.com/innovators-guide/5-top-electric-vehicle-startups-in-energy/>

https://en.wikipedia.org/wiki/Charging_station

<https://arena.gov.au/assets/2019/03/managing-the-impacts-of-renewably-powered-electric-vehicles-on-distribution-networks.pdf>

<https://www.plugshare.com/location/173737>

<https://www.recargo.com/about.html>

https://en.wikipedia.org/wiki/Electric_vehicle_network

<https://www.digitaltrends.com/cars/electrify-america-evgo-and-chargepoint-interoperability-agreement-for-electric-car-charging/>

<https://goelectricstations.com/?lang=en>

https://niti.gov.in/writereaddata/files/document_publication/EV_report.pdf

<http://www.siam.in/uploads/filemanager/114SIAMWhitePaperonElectricVehicles.pdf>

<https://energy.economictimes.indiatimes.com/news/power/electric-vehicles-will-account-for-over-a-half-of-all-passenger-vehicle-sales-by-2040/72144282>



Thank You