

Artefact Development and Evaluation Progress

Utsav Sharma

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1 Description of progress in Artefact Development

My artefact for my project is the Microgrid Scenarios and Microgrid Datasets. The scenarios that I've created are based on the Microgrids behaviour to different situations. Most of these scenarios are based on concerns regarding to a microgrid as most of the scenarios are temperature based, supply-demand and system failures.

Here's the list of scenarios I've created for my project-

- Temperature above a certain value i.e. a very humid day- With more energy being generated, the microgrid can store that extra energy in Energy Storage Facilities also known as Batteries.
- Rain affected or a Cloudy day- With more rain during the day, the microgrid won't be able to generate minimum required electricity for the day. In such cases, the microgrid usually uses stored energy.
- System failure- System failures usually occur in the main grid and the microgrid disconnects itself from the main grid in order to run in island mode.
- Addition of new buildings- With the addition of new buildings, more electricity will be required to run those buildings efficiently.
- More solar panels being used for energy generation- With more solar panels being used, more energy will be generated.
- More appliances requiring energy in several buildings- The energy requirements of these buildings will go up and they will require more energy to operate successfully.

I'm yet to begin with my datasets creation.

2 Change in plans during sprint

My goals for this sprint is to start with my artefact and make a significant amount of progress in it. During my weekly discussion, my supervisor advised me on what my artefact should look like and pointed out on the mistakes I made. As discussed above, my artefact is the Scenarios I discuss and the datasets I create for functioning the microgrid.

3 Details on Artefact Evaluation plan

Both of my artefacts are the most essential features of my project. I will create a virtual environment based on a Microgrid and then run simulations based on the scenarios. The different scenarios will help in building and shaping up the simulation and the data collected will be used for running those scenarios successfully.