## Jan 25, 2024 10:00 AM | [Senior Design Team 50 Biweekly Meeting](https://www.google.com/calendar/event?eid=MnBuOTRzNTVvNDJwOW4xN240NmhmZG1pYWpfMjAyMzEyMDVUMTQwMDAwWiByYWJhaWxlM0BuY3N1LmVkdQ)

Attendees:

| Present [Huangjie Gong](mailto:huangjie.gong@us.abb.com)  Present [Andrew Bailey](mailto:rabaile3@ncsu.edu)  Present [Manny Harris](mailto:erharris@ncsu.edu) | Present [Ralph Cullom](mailto:rmcullom@ncsu.edu)  Present [Labib Kasim](mailto:lkasim@ncsu.edu) |
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[Team Charter - 50\_ResidentialPowerDisaggregation\_Fall\_2023](https://docs.google.com/spreadsheets/d/19QlSl8Cbm5M9cFBJFcICrvQb3tRDH6ZTBHSlsWt19BE/edit#gid=770004057)

Huangjie comments highlighted!

Agenda:

* **Walk in item solicitation**
* **Reminders**
  + Critical Design Review. EB2 2095. Jan 30, 2024 10:00 AM
* **Previous Action Items**
* **Timeline/Subsystem review**
  + **Data measurement**
    - CT measurements with ESP32
    - Sending data to InfluxDB through homeassistant with ESPHome
  + **Data handling & preprocessing**
    - Reading/writing data to/from influxDB to/from python script
    - Preprocessing values and adding weather from API
  + **Machine Learning**
    - Feature selection grouping for model
    - Model accuracy & verification with Pecan St. data
      * Weather data, occupancy, construction
  + **Graphical Interface**
    - Data source connection to influx
    - Displaying predicted data on dashboard
      * How often will the dashboard update results
      * Start small then add features
* **Walk in items**
  + - Update block diagram frequently for display purposes
* **In person meeting** 
  + Next meeting 2/8/24 in person at Hunt conference room, senior design lab, or ABB if possible (Huangjie traveling)
* **Next lab meeting**: January 29th @ (TBD) p.m.

Walk in items:

* General feature categories for machine learning
* Using pecan street data for training

Previously discussed items:

* [Reading CT measurements to influxDB](https://github.com/CircuitSetup/Expandable-6-Channel-ESP32-Energy-Meter)
  + [ESPHome](https://esphome.io/components/sensor/atm90e32.html) with Influx
* InfluxDB for data storage
  + adding weather column based on timestamp and location