

# Ethics and Professional Responsibility

sddec24-20

# Project Overview

- Simplifies power grid management through AI-based solutions.
- Streamlines the complex and ever evolving power system data.
- Translates DSS scripts into natural language for ease of understanding by power plant employees.

# Areas of Professional Responsibility

- Communication honesty
  - Maintaining honesty is relevant to our project because each of us have been in projects where communication and honesty was not upheld to a high standard and taken seriously. We want to accomplish the goal of seeing this project completed, but we also want to be honest about our process, how we are getting there, and if we are struggling with anything or making progress.
  - Our approach to this is in our team contract. We all agreed to be honest with each other about updates on our responsibilities, and to maintain communication so we are all on the same page. We will uphold this contract in the case that someone doesn't comply with it.
  - Our approach upholds ethical and professional responsibilities because we are passionate about this project. We want to see this through, but in order to do so, we need to be honest with ourselves and with our team. The team contract allows us to take accountability for our mistakes in the event that one of us doesn't adhere to it. Contracts like ours are common in the workforce, where teams working on a project have a contract outlining everyone's responsibilities and what actions will be taken in case if someone doesn't comply with it.

# For Improvement

## Work competence

- Though there has been great effort every week in each role, there needs to be increased collaboration from the Power Systems team to inform the AI specialists of the data they are training with. Work competence in the overall functionality of the project will be improved with this DSS support.
- Currently, the collaboration has been done in weekly client meetings which has not been enough contact for DSS to be explained well. Our new approach will emphasize increasing professional soft skills and specifically asking each other questions regularly between meetings.
- Our approach now has detailed research in both Power Systems and AI, but this needs to merge as soon as possible for design to occur on pace.

# Ethical Uncertainty

## Property Ownership

- At the moment, we plan to implement security measures to protect the grid data from being intercepted by others outside of the government and utility entities. We will carefully design and test GridGPT to ensure privacy and security of information on grid parameters, generation schedules, and grid additions.
- While beneficial to grant access to different grid operators, we will implement security to prevent impact of hackers who plan to affect the power flow of the grid. As government property, security and efficiency both need to be maintained with high importance.
- We have not entered the building phase, however, the approach we will take is emphasizing security testing in such a way that our product would be appealing to the government sector.