Project Timeline: Dynamic Rhythms of Power Challenge
Total Time Remaining: 26 days
Challenge Submission Deadline: May 1, 2025
Final Report & GitHub Repo Due: May 5, 2025
Final Presentation: May 8, 2025

Week 1: Data Preparation & Feature Engineering

- Data Handling & Preprocessing:
    - Load and clean NOAA storm data and power outage dataset
    - Handle missing values and standardize formats
- Feature Engineering & Justification:
    - Develop initial features (e.g., storm severity lag features, population density)
    - Visualize and validate features using EDA
    - Justify features based on outage relevance

Week 2: Model Development

- Model Training & Evaluation:
    - Test baseline models
    - Select final model architecture
    - Evaluate using precision-recall, lead-time error, etc.
    - Begin drafting model performance sections for the final report

Week 3: Interpretation & Refinement

- Interpretability & Insights:
    - Explore domain-driven insights and weather-event patterns
    - Organize codebase, clean up scripts, ensure modularity
    - Create requirements.txt, document assumptions, structure final repo

Week 4: Finalizing Submission

- Putting together deliverables
    - Finalize 679 paper
    - Polish Jupyter Notebook, finalize evaluation code
    - Add visualizations and storytelling to the notebook
    - Package final submission (zip, model checkpoints, README, license)