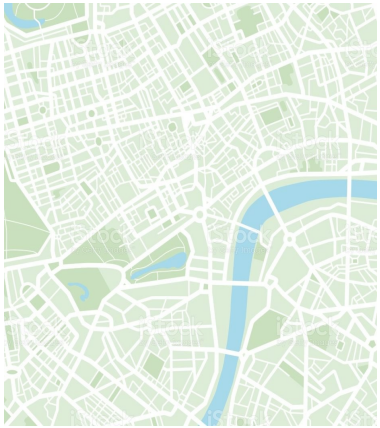


SPARC

Save Power And Reduce Carbon

CS 329S | Milestone 2 | February 13, 2022

Kun Guo, Nina Prakash, Griffin Schillinger Tarpenning

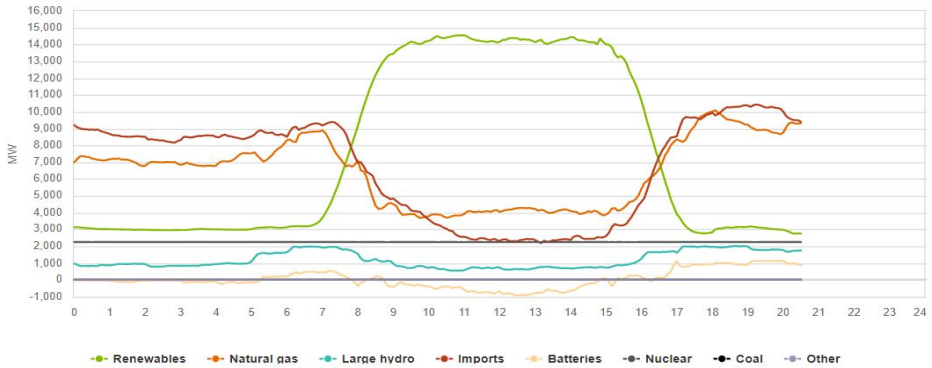
Pitch

- Electricity supply → 32% of CO_2 emissions in the US
- Electricity supply = **Renewable** + **Nonrenewable** sources
- How many CO_2 emissions am I responsible for when I use electricity? Can I adjust my future behavior to reduce emissions?
- **SPARC:** Web-based dashboard that allows a user to understand CO_2 impact of daily activities so that they can adjust behavior.

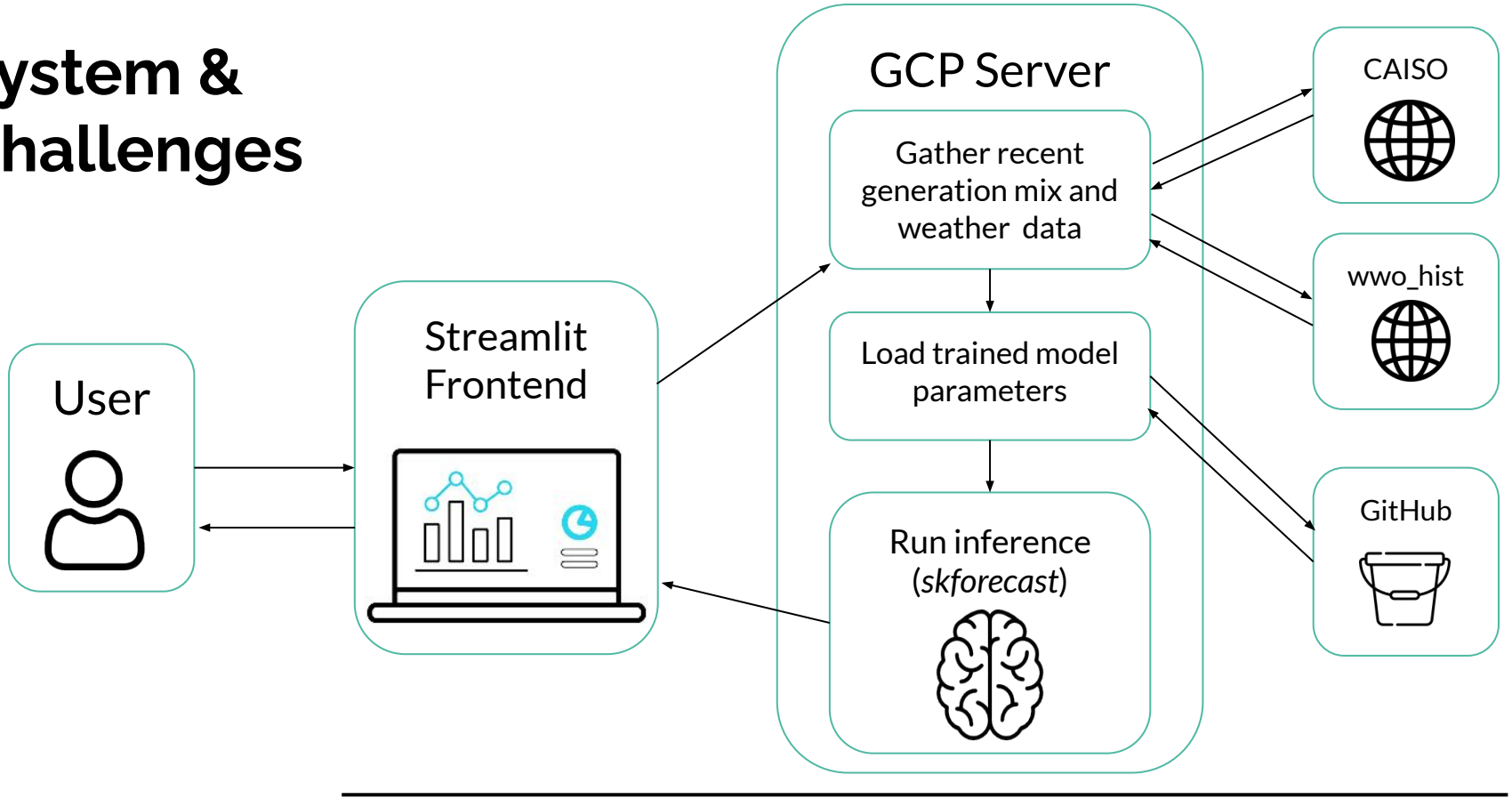
Charging your EV at 1:00pm this afternoon would produce

___ gCO_2

You may save ___ $\%CO_2$ if you charge at ___(am/pm) instead



System & Challenges



Future Work

- Improve model performance and granularity
- Add automatic model update/retrain to the pipeline (CI/CD)
- Add more tools for user interaction (recommendation, see more granular views of the predicted grid mix and carbon emissions, etc.)
- Expand data processing pipeline to include data outside of California