

Multi-site assessment of extreme weather impacts on PV plant performance and reliability

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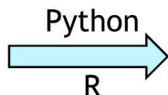
Project goals

- Analysis of site-level performance and weather data to identify trends
- Identification of performance variabilities across sites, climates, and event types

Multi-dataset coupling

Industry data

- Site characteristics
- Production data
- O&M logs



Site metrics

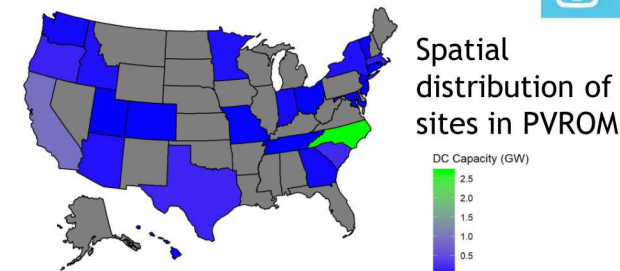
- Yield loss
- Performance metrics
- O&M activities



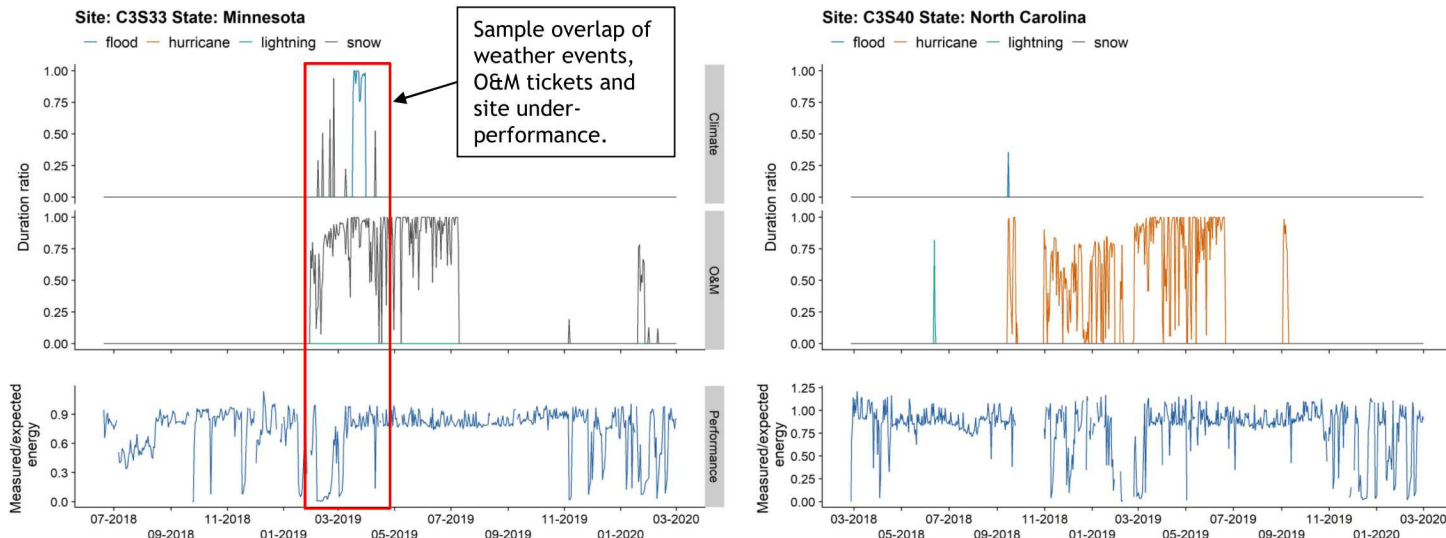
Climate data

- NOAA event database
- GHCN weather data
- PRISM

Site-level hourly and daily dataset coupling



Sample site-level integration



Challenges & next steps

- Narrow periods of overlap between performance, climate, and O&M data
- Complete analysis for storm-related OM tickets
- Use machine learning to understand linkages between OM events, weather events, and site performance

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