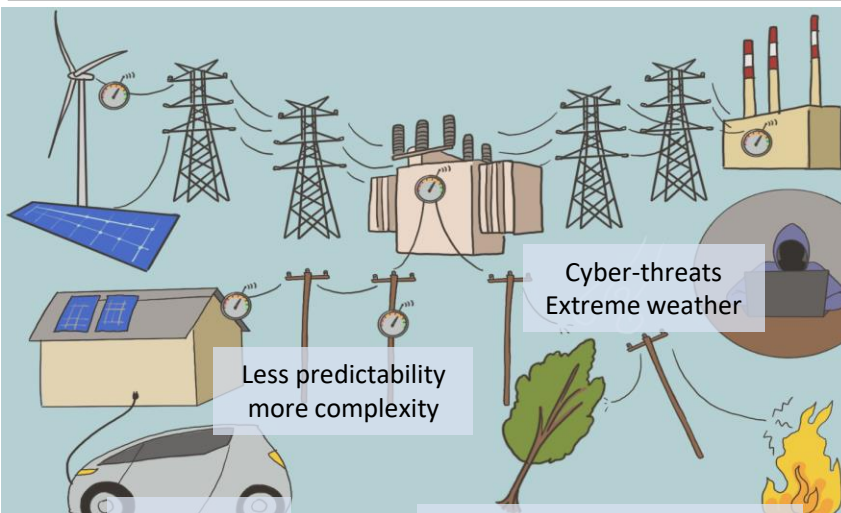




Award #1840192,0052 & 0083 -FW-HTF: Collaborative Research: Augmenting and Advancing Cognitive Performance of Control Room Operators for Power Grid Resiliency
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 A. Janisko; Snohomish PUD

The key objective of this project is to help power grid operators perform better, especially during extreme adverse events, with advanced monitoring and decision support tools. The project is developing innovative tools by bringing together principles from cognitive neuroscience, data science, machine learning, artificial intelligence, cybersecurity, and power engineering.

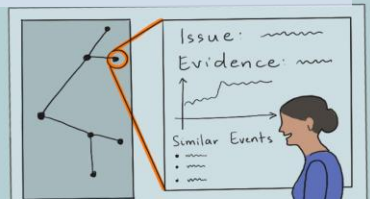


Alarm Processing, Anomaly processing, Criticality Ranking, Root cause Diagnosis,
 Operator Training under Extreme Event considering Cognitive Analysis

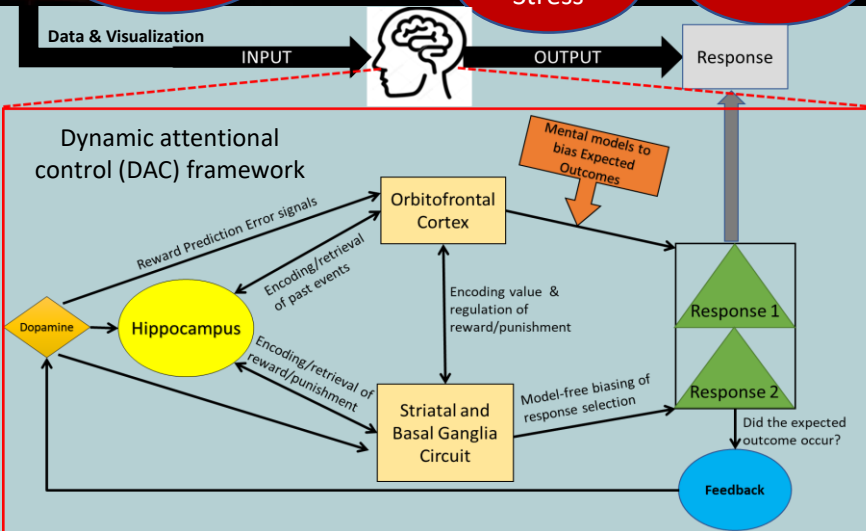
- Validation with students trained as operator
- Validation with real grid operators



Decision support tools and training for human operators



Modeling and simulation to identify how present situation compares to past



Post and pre-training Cognitive Flexibility (CF)
 Post and pre-training working memory (WM)
 Impact on grid resiliency with training

New situations where experience doesn't apply