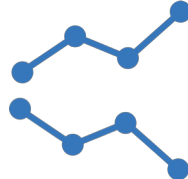




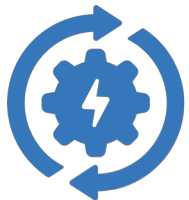
Regression, Time Series Analysis

- **Prediction**
 - How will the system evolve in the near future?
- **Risk assessment:**
 - What is the risk of X?



Model Comparison, Design of Experiments

- **Conditional forecasting**
 - How will the system respond if X changes?
- **Counterfactual analysis**
 - What would have happened if X had been Y?
- **Comparative impact**
 - What is the difference in utility between strategy X and strategy Y?



Stochastic Optimization, Bayesian Inference

- **Optimal planning:**
 - What is the optimal amount of X to introduce to maximize utility Y?
- **Risk assessment:**
 - What is the risk of X?
- **Outcome avoidance:**
 - What is the optimal action or intervention to reduce the risk of X decreasing more than Y?