

## **Simulation Models**

Simulation Models are mathematical representations of real-world systems or processes that enable experimentation and analysis under controlled conditions. They mimic the behavior of complex systems over time, allowing researchers, engineers, and decision-makers to explore different scenarios, predict outcomes, and optimize performance. Simulation models are used in diverse fields, including engineering, economics, social sciences, healthcare, and environmental science. They help understand system dynamics, test hypotheses, and make informed decisions without the need for expensive or risky real-world experiments.