Multi-Model Based Incident Prediction and Risk Assessment in Dynamic Cybersecurity Protection for Industrial Control Systems

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Outlines

Introduction

Hazardous Incident Prediction

The Bayesian Network Based Knowledge Modeling

Incident Prediction

Dynamic Risk Assessment

Classification of Incident Consequences

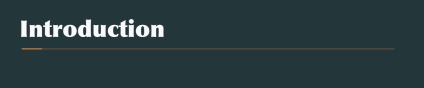
Quantification of Incident Consequences

Calculation of Dynamic Risk

Simulation

Knowledge Modeling and Simulation Platform

Simulation and Result Analysis



Hazardous Incident Prediction

Attack Level

Function Level

Incident Level

Collection of Evidence



Dynamic Risk Assessment

Harm to Humans

Environmental Pollution

Property Loss

Quantification of Harm to Humans

Quantification of Environmental Pollution

Quantification of Property Loss

Calculation of Dynamic Risk



Knowledge Modeling and Simulation Platform

Simulation and Result Analysis

