WEB OF THINGS FOR DIGITAL TWINS

ENABLING DIGITAL TWINS USING W3C THING DESCRIPTIONS

DEMYSTIFYING DIGITAL TWINS

A DIGITAL REPRESENTATION OF A PHYSICAL ENTITY – A DIGITAL SHADOW

ACQUISITION OF DATA USING SENSORS

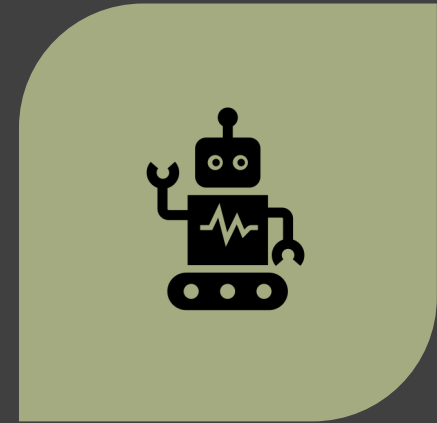SIMULATING THE DEVICE'S BEHAVIOR FOR INSIGHTS AND PREDICTION

DIGITAL TWIN VS. SIMULATION

UTILIZING REAL-TIME
SENSOR DATA

DATA-ENABLED
ENVIRONMENT SIMULATION

REAL-TIME INTERACTION
AND MANIPULATION

HOW CAN THE WEB OF THINGS ENABLE DIGITAL TWINS?

- The W3C Thing Description (TD) as a descriptive representation of a physical device

  - Communication Interface

  - Meta-data

  - Semantic Descriptions as extension for domain specific meta-data

  - Can be easily parsed and used in any simulation environment

HOW CAN THE WEB OF THINGS ENABLE DIGITAL TWINS?

- Ideas and topics of discussion:
    - Behavior Description
    - Capturing Dynamic Behavior
    - Environment Description formats
    - System Level Digital Twin Generation
    - Embedding vs. Linking Meta-Data