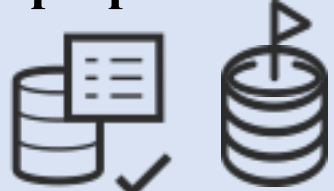| **Data**	**Model**

Warning dataset preparation
- Warning dataset acquisition
- Warning dataset labeling
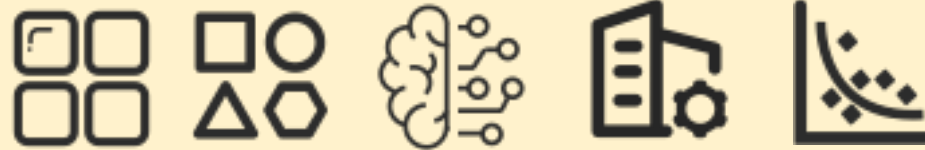
Data →

Warning dataset preprocessing
- Warning feature extraction
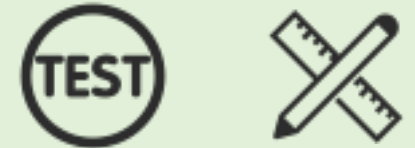- Warning feature selection
- Warning dataset rebalancing

Vector →

AWI model construction
- Model category in AWI
- Learning category in AWI
- AWI model construction structure
- AWI model construction scenario
- AWI model training

Model →

AWI model evaluation
- Validation strategy in AWI
- Performance measure in AWI

Typical ML-based AWI workflow

The proposed research questions based on the typical ML-based AWI workflow

RQ1: How do ML techniques work for AWI?

RQ2: What are the characteristics of warning datasets used by ML-based AWI approaches?

RQ3: What constitutes the warning dataset preprocessing stage of ML-based AWI approaches?

RQ4: What model construction techniques are used by ML-based AWI approaches?

RQ5: How are ML-based AWI approaches evaluated?