

Erkennung von Kontext aus Sensordaten in einer intelligenten Wohnung

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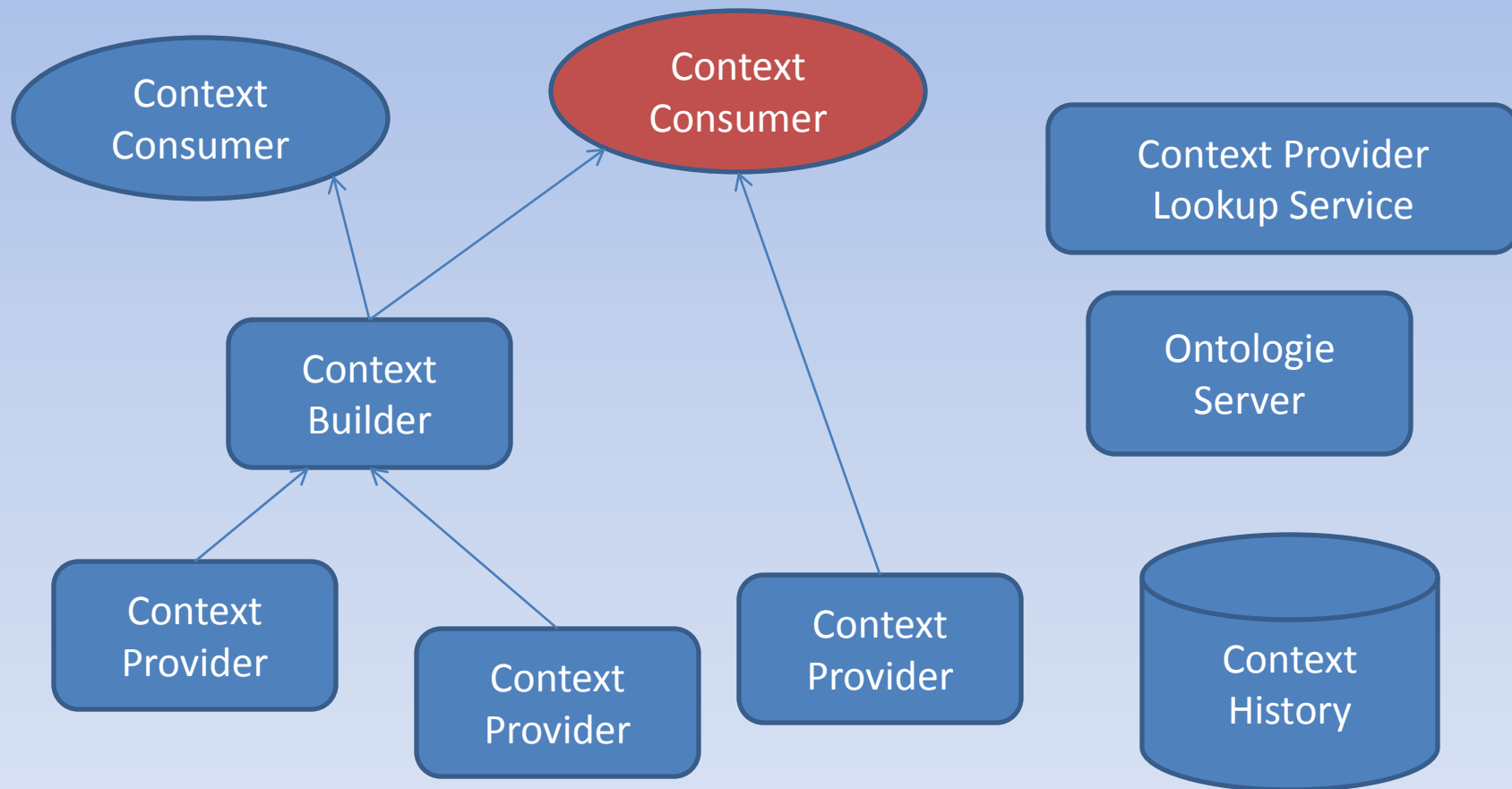
- Motivation
- Ziel der Arbeit
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Motivation

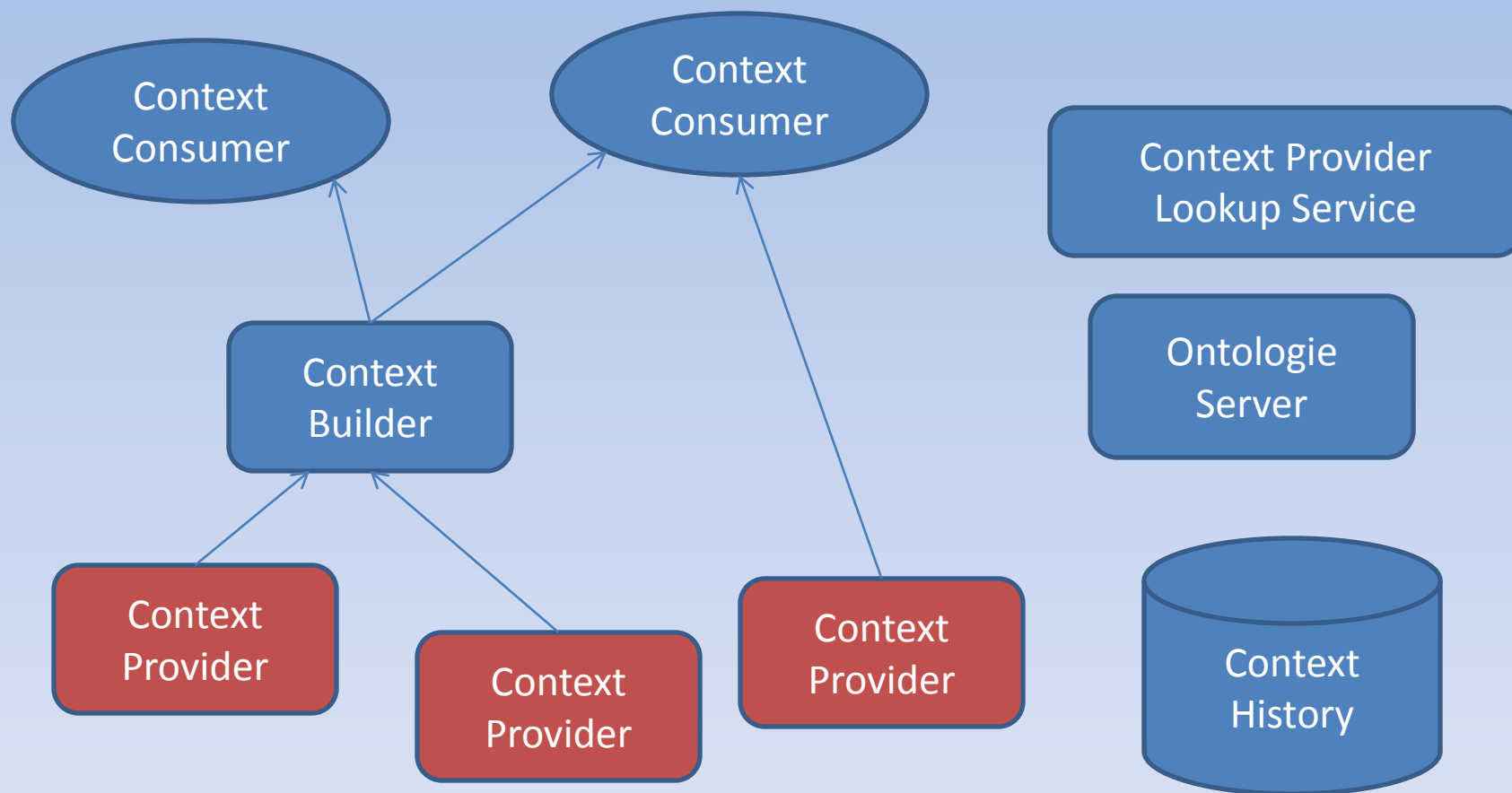
- Wecker 2.0
- Kontext
- Kontexterkennung



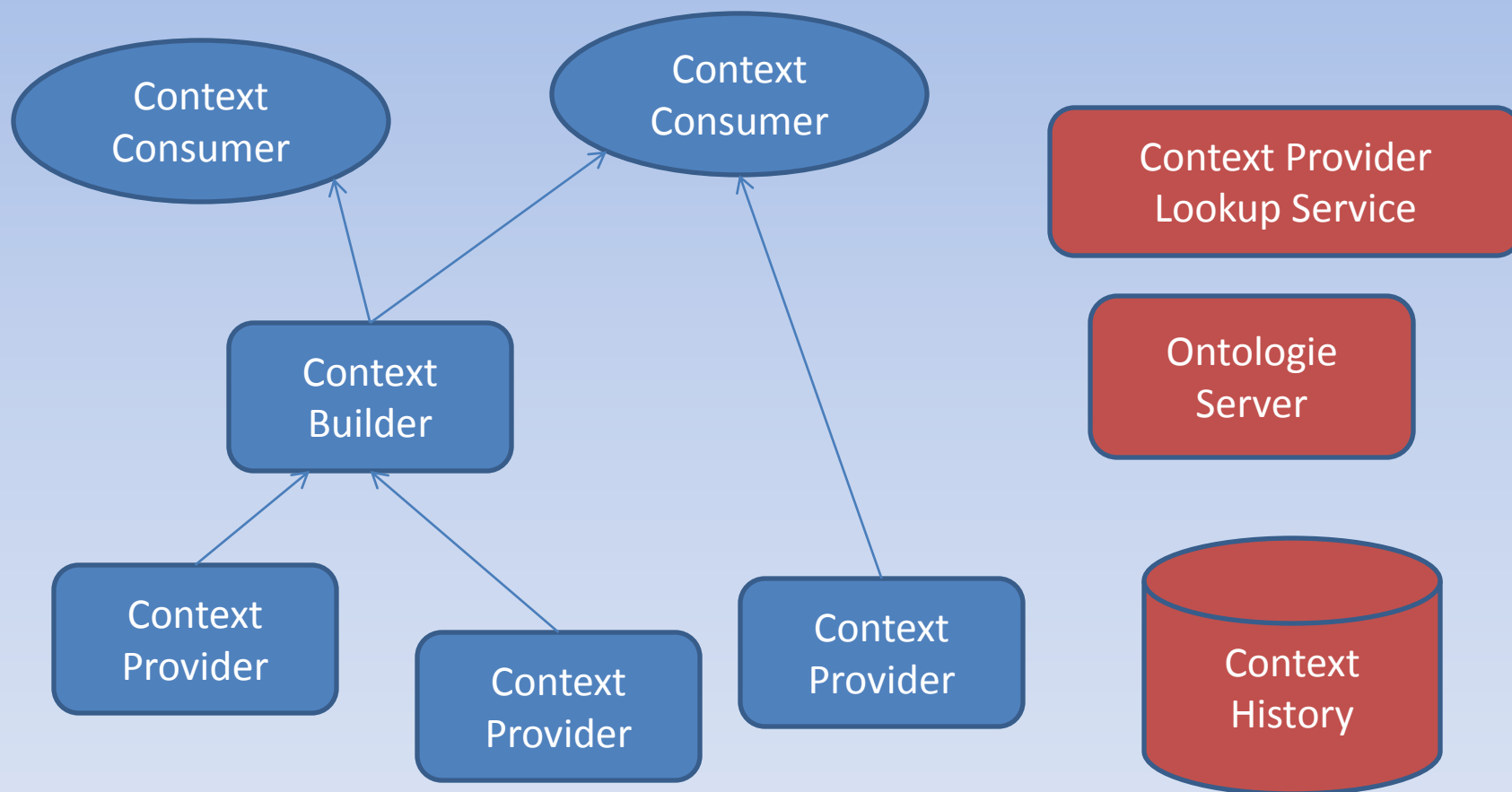
Aufbau von Kontext Erkennung



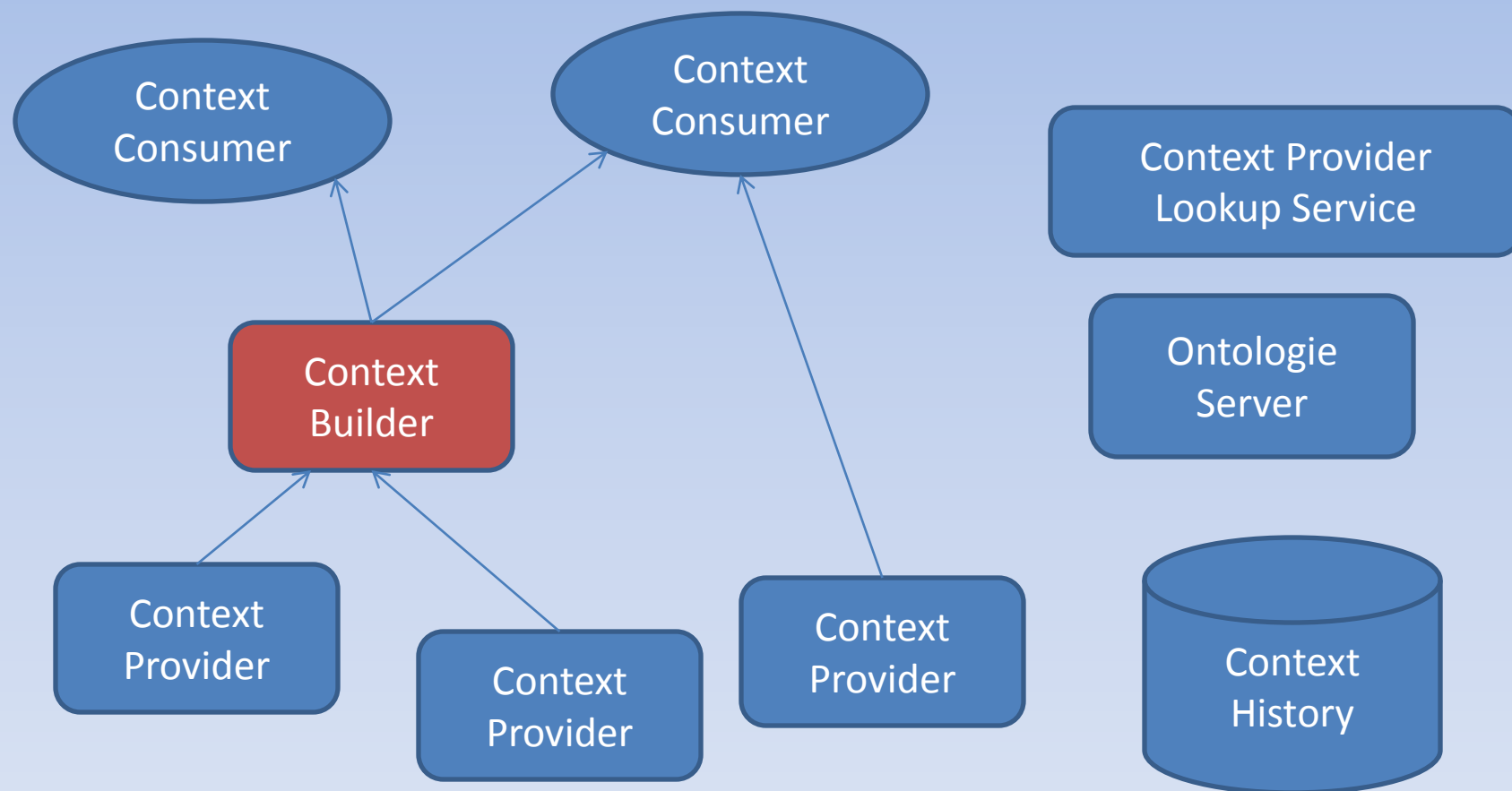
Aufbau von Kontext Erkennung



Aufbau von Kontext Erkennung



Aufbau von Kontext Erkennung



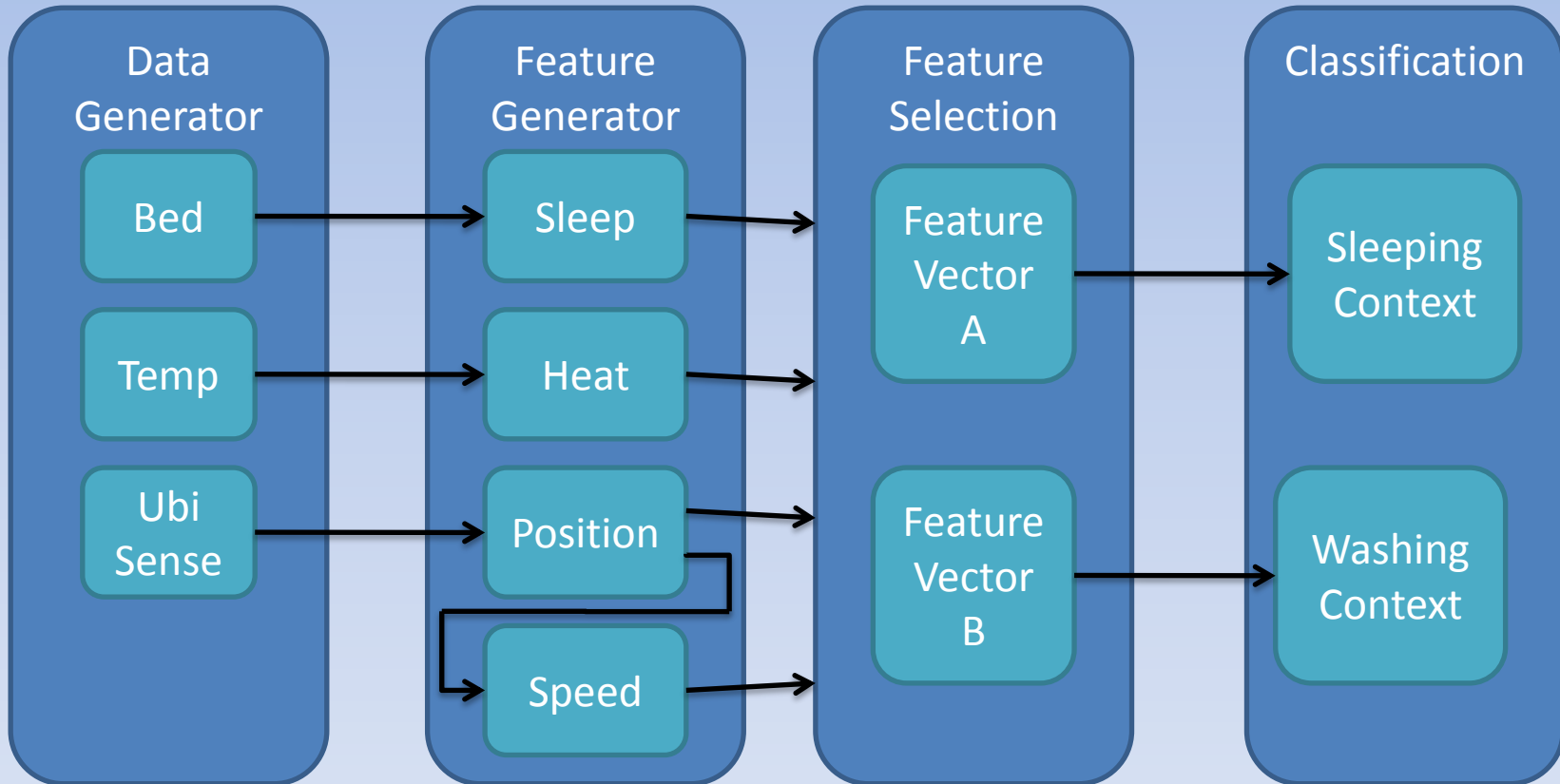
Vorarbeiten

- Wecker 2.0 (Projekt 1 / 2)
- Kontext (AW 1 / Projekt 1)
- Anwendungsmöglichkeiten (AW 2)
- Event Steam Processing (Bachelorarbeit)

Architektur

„Context is any information that can be used to characterize the situation of an entity. An entity is a person, place, or object that is considered relevant to the interaction between a user and an application, including the user and applications themselves“ [13]

Architektur

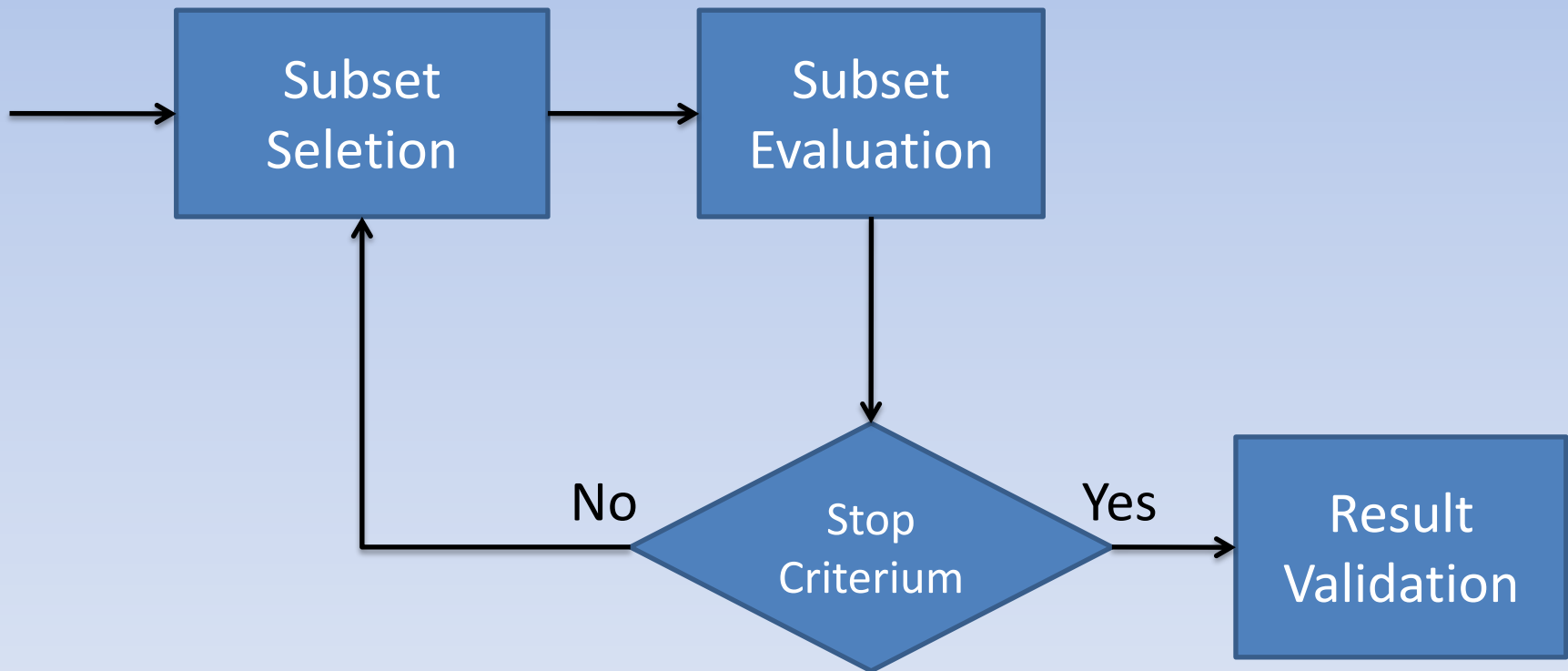


Vorgehen

- Kontext-Erkennung („Wecker 2.0“)
 - Identifizieren (Projekt 2)
 - Darstellung (Projekt 1)
 - Voraussetzungen
 - Klassifikationsalgorithmen

Vorgehen

- Feature Selection [14]



Vorgehen

- Feature Generator
 - Verfahren
 - Klassifikation
 - Ableitung
 - Clustering
 - Möglichkeiten
 - Position
 - Geschwindigkeit (vielleicht nicht)
 - Event Stream Processing

Vorgehen

- Data Generators (z.B. Sensoren)
 - Arten
 - Datenformat
 - Datenvorverarbeitung
 - Event Stream Processing

Herausforderungen

- Abhängigkeiten
 - Sensoren
 - Datenmenge
- Komplexität
 - Feature Subset Problem
 - Klassifikation
 - Kontext Probleme
- Ziele
 - Definition



Zusammenfassung

- Wecker 2.0
- Sensoren -> Features -> Kontext
- Blackboard
- Feature Selection
- Event Stream Processing
- Klassifikation

Fragen?

Literatur

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- Folie 14
 - www.abautpixel.de
 - Fotograf: [MrBounce](#)