CORVETTE

Cognitive Sensing Framework for Vehicle-Fleet Driven Data Services

Pro²Future

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MOTIVATION & GOALS

The project aim is to **develop an infrastructure for cognitive vehicle fleet monitoring**, which includes the **collection**, **evaluation**, **interpretation** and use of **vehicle data** in the context of various **data-driven services**. Several **services** and **use cases** for data-driven support/expansion of development processes as well as the provision of services on the vehicle (e.g., predictive maintenance) were identified in the project concept phase and will be covered in the project. The fleet data can be utilized to detect new trends in mobility.

- Rapid **prototyping** of onboard measurement for **fast data collection** and **method development**
- **Modular device design** to capture use-case specific data and enable future extensions (sensor & services)
- Capture, interpret and preprocess data on device -> produce smart data for further analysis

Project FactBox

Project Name CORVETTE
Project ID MFP 4.1.1
Duration 36 Months

Area 4.1
Cognitive Products

Project Lead
Dr. Konrad Diwold

APPROACH

Development of **rapid prototype** for **data collection**
Development of **scalable backend for training, interpretation and service integration**
Research on **model adaptivity, robustness and stability**
Research on **novelty detection in multimodal data streams**
Automated ML model training development for deployment
Test & demonstration of developed methods in real-life use cases

CONTRIBUTION
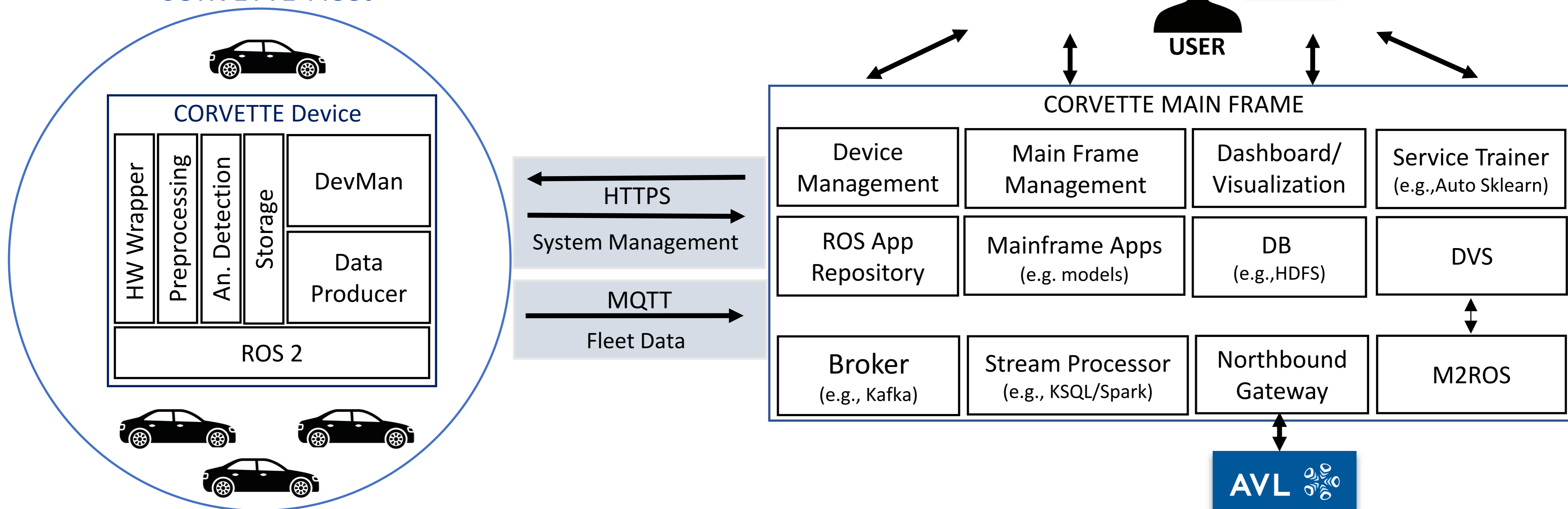
Scientific contribution
Development of new methods to achieve fast data collection in automotive applications. Design and development of novel algorithms and programs tailored for application in automotive environments.

Economic contribution
Implementation of a modular device with the according software which can be deployed in a highly dynamic environment.

SYSTEM ARCHITECTURE