



HTW_D Hochschule für Technik und
Wirtschaft Dresden
University of Applied Sciences

Laboratory of
Automotive
Mechatronics



Google Developer Group 2025 Hackathon Mechlab-Part: Driver Assistance

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- Different test cars (BMW i3, Renault Twizy,
- VW Passat GTE, Mercedes EQE, VW ID.7)
- Matlab with all toolboxes
- Lidars: Velodyne, Ouster, Livox, LS-Lidar (1550nm), OPSYS
- Radar: Continental SRR & LRR
- Shortly: Spot® - The Agile Mobile Robot (Boston Dynamics)

Partners:

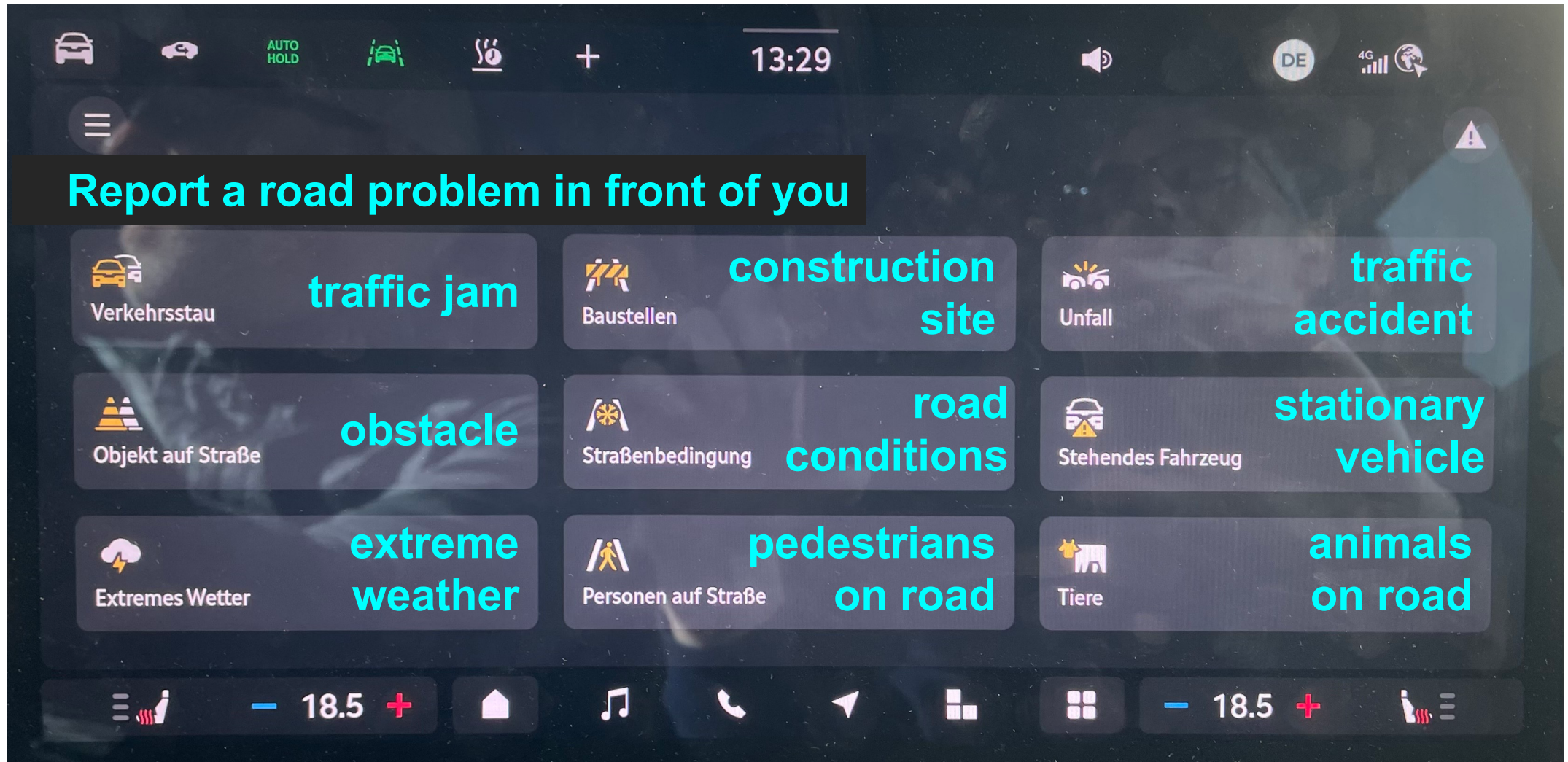
- tracetrone GmbH
- FSD Fahrzeugsystemdaten GmbH
- GTÜ GmbH
- Accident Research Institute
- Mercedes-Benz AG
- **Dewesoft d.o.o. (SI)**
- **eVersum technologies d.o.o. (SI)**

Universities:

- TU Dresden
- University of Primorska (Slovenia)
- Univ. of the Balearic Islands (Spain)

<http://www.mechlab.de/>

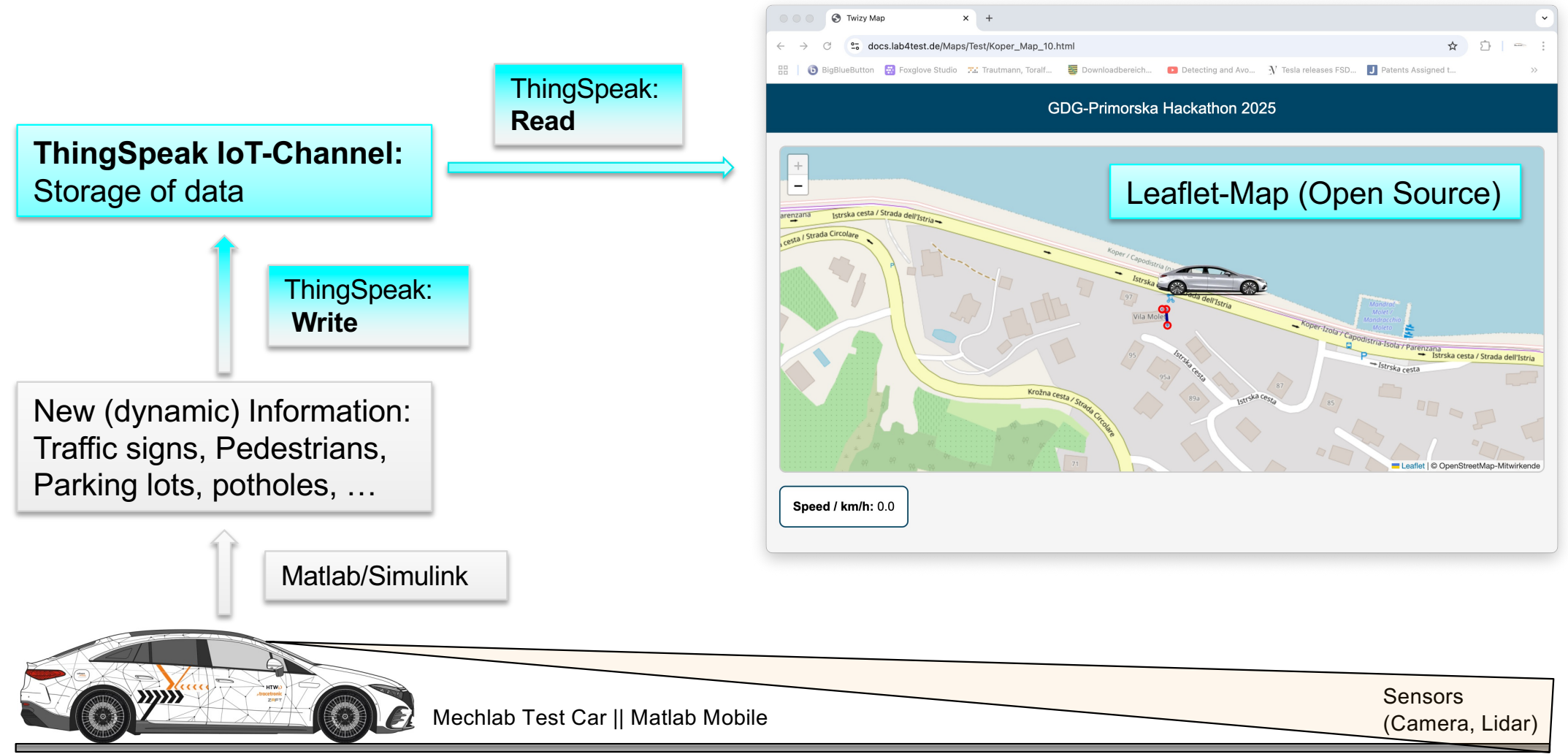
Proposal → sharing traffic information



- Only new vehicles can exchange information
- Data is only available within the vehicle fleet
- Our test vehicle Skoda Enyaq did not exchange data with the VW ID.3 (same group)

→ Open-Source Solution is necessary

Possibility of implementation



- included in the Matlab license and therefore free of charge
- easy to use
- But: limited update rate (15 sec.)
 - sufficient for a test

Your test channel

thingspeak.mathworks.com

OutlookKlassikOPALWetterGPS VIZHisQsTT CONFChatGPTMATLAB AIMDR KLASSIK Playlist

Klassische Musik hören | Klassik RadioGoogle ÜbersetzerAPI Keys - ThingSpeak IoTGoogle Developer Groups GDG on Campus University of...

ThingSpeak™

Channels Apps Devices Support

Commercial UseHow to Buy

GDG-Primorska

Channel ID: 2965429
Author: mwa0000032348144
Access: Public

Channel to share information of GDG-Hackathon 2025
gdg-primorska

Private ViewPublic ViewChannel SettingsSharingAPI KeysData Import / Export

Write API Key

KeyMYQKJMHXIBVF8V28

Generate New Write API Key

Read API Keys

Key9Y4VITQR2VJ3DQQL

Note

Save NoteDelete API Key

Help

API keys enable you to write data to a channel or read data from a private channel. API keys are auto-generated when you create a new channel.

API Keys Settings

- Write API Key:** Use this key to write data to a channel. If you feel your key has been compromised, click **Generate New Write API Key**.
- Read API Keys:** Use this key to allow other people to view your private channel feeds and charts. Click **Generate New Read API Key** to generate an additional read key for the channel.
- Note:** Use this field to enter information about channel read keys. For example, add notes to keep track of users with access to your channel.

API Requests

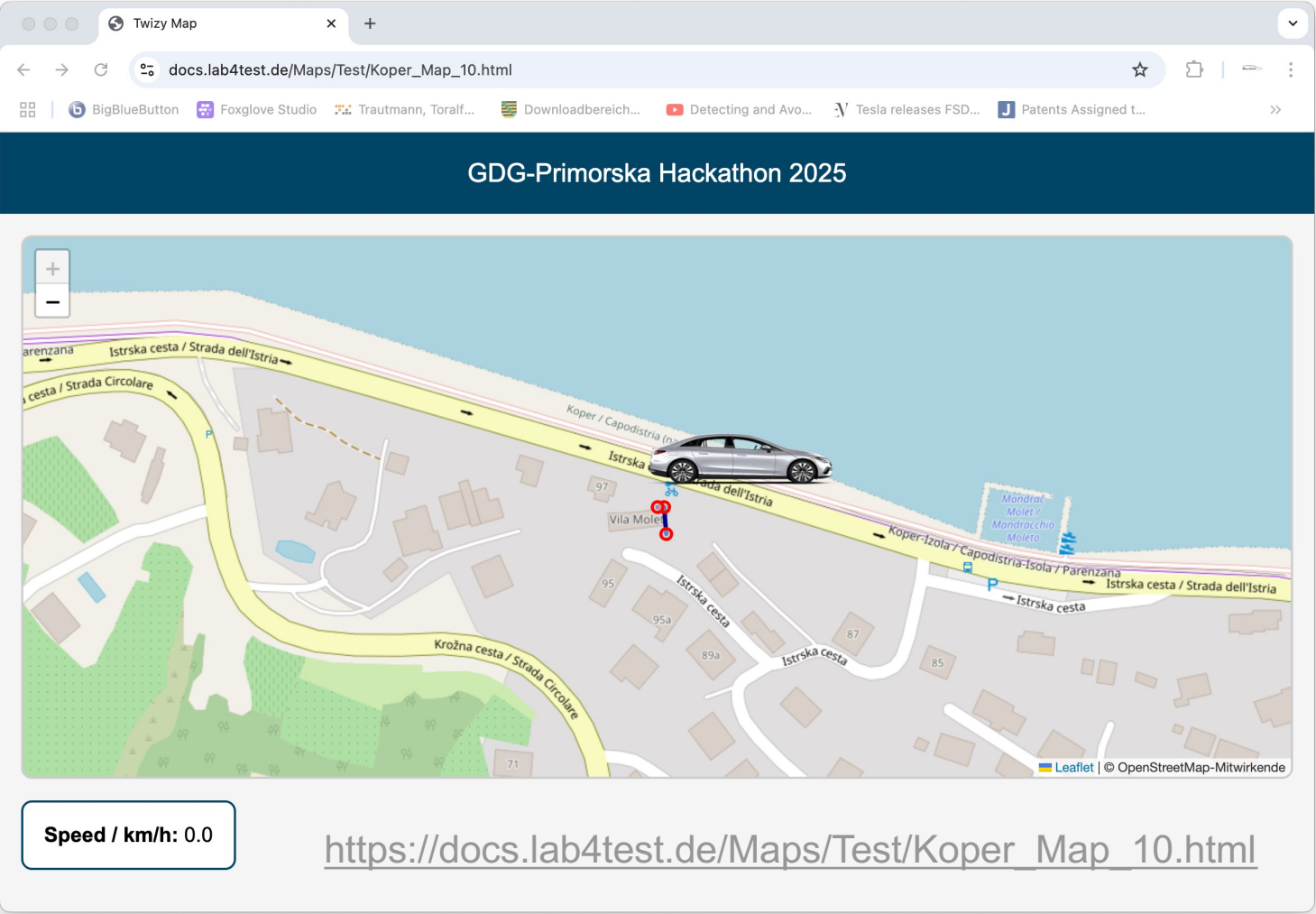
Write a Channel Feed

GET https://api.thingspeak.com/update?api_key=MYQKJMHXIBVF8V28&field1=0

Read a Channel Feed

GET https://api.thingspeak.com/channels/2965429/feeds.json?results=2

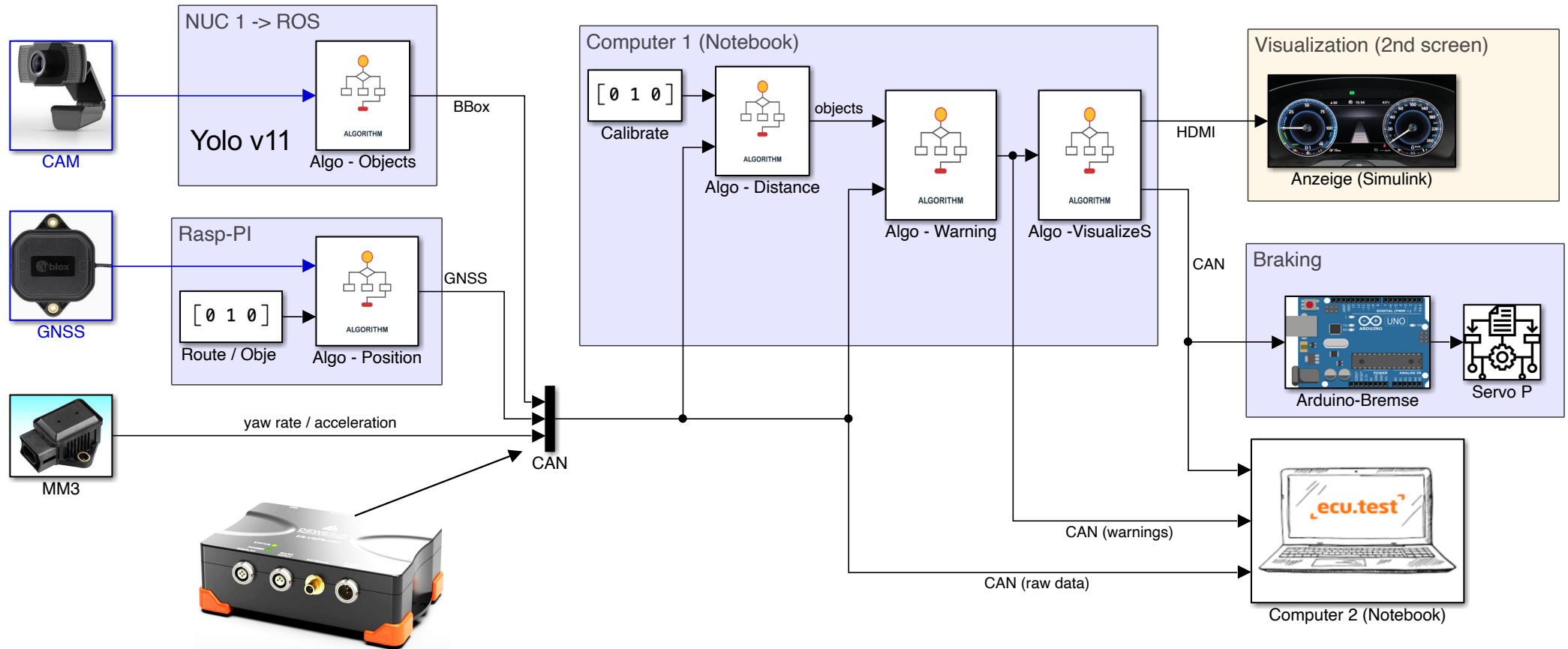
Mechlab EQE Test map



Professional Use – Traffic Sign Detection and Verification (1)

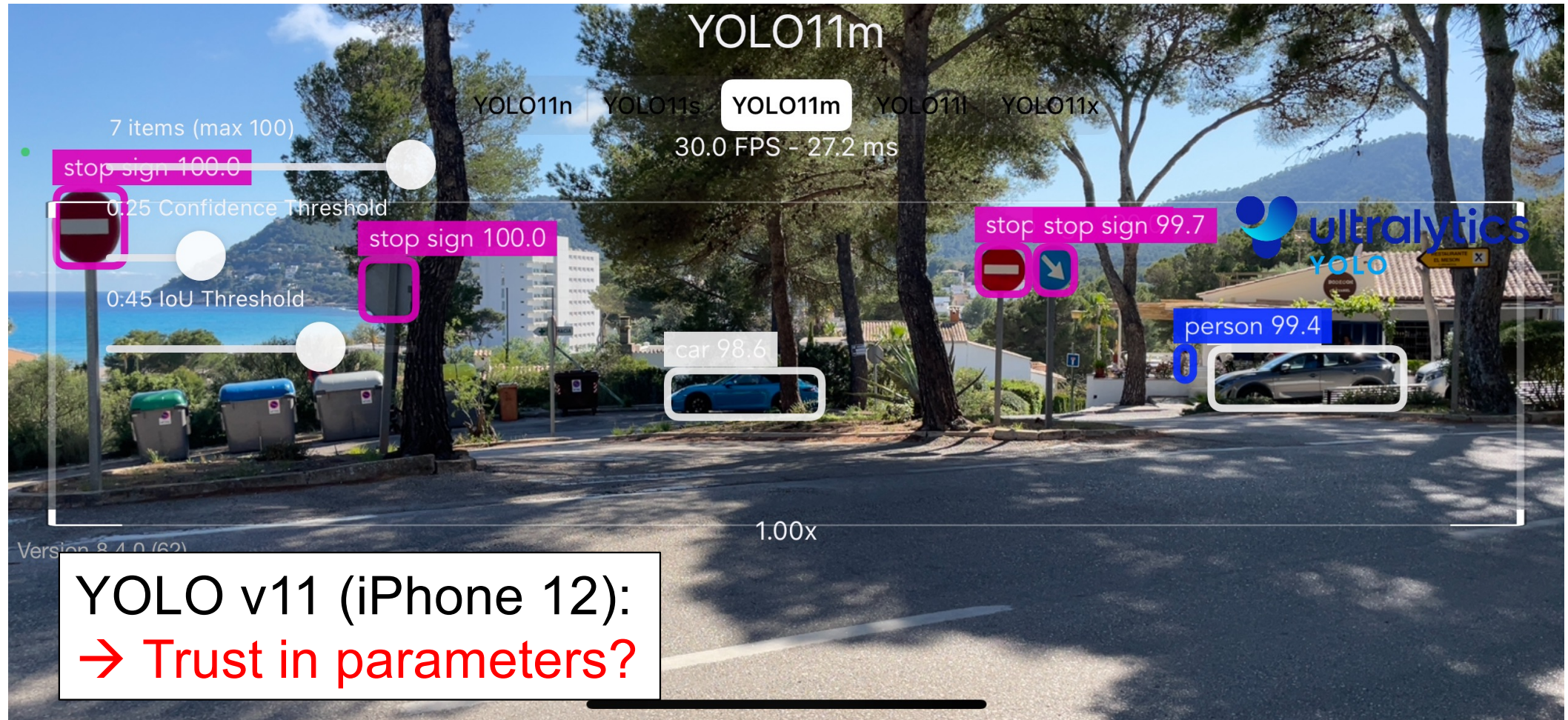


EntwMechSys Software Architektur 3B



DS-VGPS-HSC(CAN-Output) → Substitute of HTWD-Receiver

Professional Use – Traffic Sign Detection and Verification (2)





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2. FAMNIT/HTWD - Hackathon

Driver Assistance – Use of AI

15-19.09.2025

Prof. Dr. Branko Kavšek
University of Primorska

22-26.09.2025

Prof. Dr. rer. nat. Toralf Trautmann
University of Applied Sciences Dresden



See you again in 2025!