AUTOMATED DRIVING LAB

AUDRI
AUTOMATED DRIVING LAB
TU/e

DRIVING AI RESEARCH

AUDRI – AI

TU/e's automated driving lab, **AUDRI**, is a university-wide facility to conduct research in **AI technologies** that allow vehicles to navigate our world autonomously, safely, and responsibly. It is an initiative under the Eindhoven AI Systems Institute, **EAISI**.

AUDRI supports AI research in

- Perception, Mapping, and Localization
- Decision making, Planning, and Control
- Modular and End-2-End AI architectures
- Human-vehicle interaction.

AUDRI provides

- Driving data, trained AI models, and HPC
- Full-stack AD vehicles
- Campus testbed with HD maps
- Driving and scaled vehicle simulators
- Digital Twin of the entire TU/e campus

integrated in one open-source framework.

Full-stack open-source vehicles

AUDRI has **fully equipped R&D vehicles** that are **Autoware compliant,** allowing for seamless **ROS 2** integration and testing of AI hardware and software in a fully functional AD stack. TU/e is an **Autoware Center of Excellence** with a team of dedicated AD experts.

360 sensors

- Vision
- Radar
- Lidar
- Thermal

Campus with HD maps and Twin

TU/e's campus is a testing environment for AD vehicles, offering **urban scenarios** and **HD maps** with matching **multi-modal localization** technologies. A detailed Digital Twin is available for real-virtual **testing of edge cases**. It enables **training of AI models** using virtual and real data from TU/e's campus.

Naturalistic driving data and AI models

AUDRI supports research on **end-to-end architectures** and collects naturalistic driving data on its campus, offering a unique research environment. TU/e has **AI HPC facilities**, including **SPIKE1,** a 4 X NVIDIA DGX B200 supercomputer for training **AI foundation models**. A collection of fine-tuned modular and End-2-End **AI models** is readily available.

Work with us

Ranging from student projects to joint participation in **European research programs**, there are many ways you can collaborate with AUDRI. Please reach out to:

Gijs Dubbelman – g.dubbelman@tue.nl

Scientific Director AUDRI

THE AUTOWARE FOUNDATION

"Working with TU/e in European projects is instrumental in achieving our AD goals."

Guus Arts, Project Manager, Advanced Technology, DAF Trucks N.V.