Dear reader,

We are pleased to send you the second edition of our KI Familie newsletter. Our top story today is the first successful measurement campaign for real data of the KI Data Tooling project. Other highlights amongst others include the DNN-specific Safety Concerns of KI Absicherung and the KI Delta Learning ERCVAD Workshop at the renowned ICCV2021 conference.

Best wishes,

The KI Familie editorial team

Successful real data measurement campaign in Aschaffenburg

KI Data Tooling has conducted a first successful measurement campaign for real data between the 17th and 19th May 2021. Manuel Hetzel (University of Applied Sciences Aschaffenburg, UAB), Jihad Miramo (Bosch) and Tobias Wagner (Valeo) report on the extensive preparations, the practical implementation and what lessons they have learned for the next measurement campaigns.

Read more

Project Highlights

Path to a comprehensive examination of corner cases

An analysis of corner cases is one of the elementary topics in the project KI Data Tooling. The project goal of creating a comprehensive data kit for autonomous driving can only be achieved, when these rarely occurring scenarios are included and contemplated. Two recent publications illustrate the progress of the project with regard to this topic.

Read more
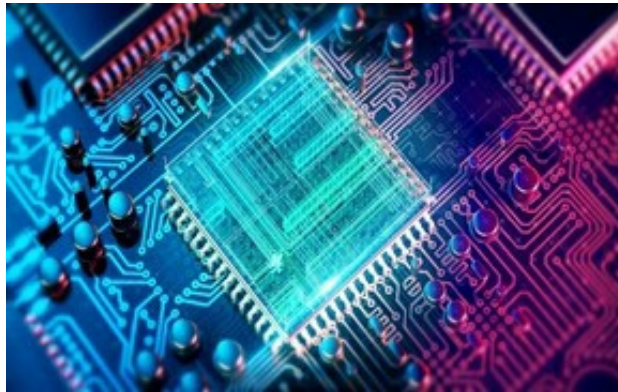
ERCVAD Workshop at ICCV2021

Partners of the KI Delta Learning research project were once again successful and received an invitation to lead a workshop – this time on October 11th 2021 at the renowned ICCV2021 conference. As autonomous driving moves closer to serial production and to its wide use in the real-world, it becomes increasingly important to deploy models on safety-certified automotive hardware with real-time operating systems.

Read more

KI Absicherung: DNN- specific Safety Concerns

For image-based perception, DNNs are the state-of-the-art means of choice but not error-free. This fact creates challenges for safety-critical tasks, such as pedestrian detection, for automated driving realized with deep learning technologies. Under some conditions, the output of the DNN might be wrong or inaccurate.

Read more

Joint workshop of KI Absicherung and KI Wissen

Following an internal workshop in May, project partners of both KI Absicherung and KI Wissen plan to discuss DNN interpretability in a joint workshop reinforcing their collaboration. Goal of the workshop is to set a common ground for further work on this important topic within the KI Familie.

Read more
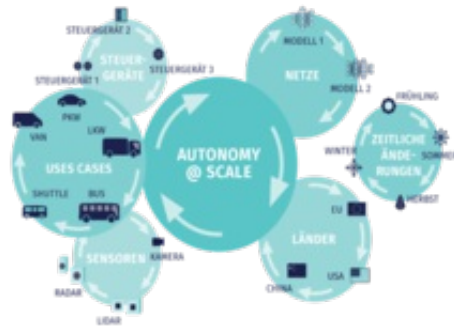
First milestone of the KI Delta Learning project succesfully completed

There is reason to celebrate: The first milestone of KI Delta Learning has been reached and all basic work has been successfully completed! What does that mean in concrete terms?

Read more

KI Delta Learning interim presentation on 7th October 2021

Save the date for the KI Delta Learning interim presentation. More information will be announced soon.

Academic Corner

Behavior Driven Synthesis of Human Dynamics

Andreas Blattmann, Timo Milbich, Michael Dorkenwald, Björn Ommer

Link to publication

More information

Understanding Object Dynamics for Interactive Image-to- Video Synthesis Andreas Blattmann, Timo Milbich, Michael Dorkenwald, Björn Ommer

Link to publication

More information

Multi-Modal Fusion Transformer for End-to-End Autonomous Driving Aditya Prakash, Kashyab Chitta, Andreas Geiger

Link to publication

Seeing Behind Objects for 3D Multi-Object Tracking in RGB-D Sequences Norman Müller, Yu-Shiang Wong, Niloy J. Mitra, Angela Dai, Matthias Nießner

Link to publication

An Unsupervised Temporal Consistency (TC) Loss to Improve the Performance of Semantic Segmentation Networks

Serin Varghese,Sharat Gujamagadi, Marvin Klingner, Nikhil Kapoor, Andreas Bär, Jan David Schneider, Kira Maag, Peter Schlicht, Fabian Hüger,Tim Fingscheidt

Link to publication

Patch Shortcuts: Interpretable Proxy Models Efficiently Find Black-Box Vulnerabilities

Julia Rosenzweig, Joachim Sicking, Sebastian Houben, Michael Mock, Maram Akila

Link to publication

Reevaluating the Safety Impact of Inherent Interpretability on Deep Neural Networks for Pedestrian Detection

Patrick Feifel, Frank Bonarens, Frank Köster

Link to publication

Towards Black-Box Explainability with Gaussian Discriminant Knowledge Distillation

Anselm Haselhoff, Jan Kronenberger, Fabian Küppers, Jonas Schneider

Link to publication

Events & News

International Conference on Machine Learning

The thirty-eight International Conference on Machine Learning will take place from 18th-24th July virtually. Find out more

ITS World Congress

The ITS World Congress will take place in Hamburg from 11-15th October 2021. Find out more

International Conference on Computer Safety, Reliability and Security - SafeComp 2021 The 40th International Conference on Computer Safety, Reliability and Security will take place from 7-10th September 2021 in York, UK or virtually.

Find out more

Self-driving cars to be allowed on UK roads this year

"Self-driving" vehicles could be allowed on UK roads by the end of this year.

Read more

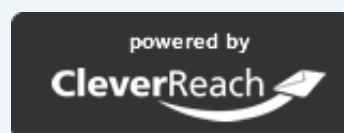Contact us for comments & feedback

ki-familie@eict.de

Follow us

Image sources:

Cover picture: TH Aschaffenburg; Path to a comprehensive examination of corner cases: Universität Kassel; ERCVAD workshop at ICCV2021: ZF Friedrichshafen AG; DNN-specific Safety Concerns: Continental; Joint Workshop KI Absicherung & KI Wissen: Gillis, Unsplash; First milestone of KI Delta project: KI Delta Learning project; ICML 2021: ICML; ITS World Congress: ITS; Safecomp: Safecomp; Self-driving cars to be allowed on UK roads: Cenni, Unsplash