Project TransML

Transfer methods of machine learning in teaching, further education, research and industry

Duration of project

11/2017 – 10/2019

Problem Statement / Approach to Solution

The aim of the TransML qualification concept is to improve the training and education of skilled workers and young academics in the field of machine learning. For this purpose, the previous experiences of the project partners in the field of machine learning will be summarized and transferred into procedural format for teaching and education. Theoretical basics, practice-oriented applications and current research results will be taken into account. The hardware and software components integrated in the qualification concept will also be used to ensure a improved level of teaching and training. To this end, various learning systems were procured within the project: a server for machine learning of the NVIDIA DGX-1 type, a workstation for experiments in automation and control technology, and the FESTO Robotino Premium robot system.

The main result of the TransML project will be that students of the Schmalkalden University of Applied Sciences and trained specialists at the AST department of the Fraunhofer IOSB will be able to independently develop suitable methods of machine learning for different applications within practical phases and exercises.

Keywords / Technology

- Teaching and training
- Machine Learning
- Deep Learning Server NVIDIA DGX-1
- Robot system FESTO Robotino
- TensorFlow, Caffe, Keras
- Automation and control engineering

Project Partners

Applied Systems Engineering (AST) Division of the Fraunhofer Institute for Optronics, Systems Engineering and Image Evaluation

Grant Information

Project Sponsors

German Aerospace Center - DLR Project Management Organization

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Representation of different learning systems (from left to right): NVIDIA DGX-1 V100 machine learning server, FESTO Robotino® with Logistic Kit and FESTO Compact workstation. These systems are used, among other things, to improve teaching and training.