DISCLAIMER: This is an unofficial translation of the German bachelor thesis internship certificate provided by Daimler Truck AG!

Mr. Donald Pfaffmann,

born in 25.05.1997 in Kandel,

joined our company on 03.02.2020 in the department PE CAE Commercial Vehicles - Integration & NVH as a bachelor student.

The title of the thesis is: Analyzing ABA-Emergency Braking Events Using Association Rule Mining and Predictive Modeling at Daimler Truck AG.

Mr. Pfaffmann's field of activity included the following tasks:

- Processing and categorization of emergency braking events based on sensor data with modern data engineering methods in a cloud environment
- Investigation of the driver's disengagement behavior from the emergency brake assistant with unsupervised machine learning
- Investigation into the prediction of the occurrence of an emergency braking event using supervised Machine Learning
- Processing of the results and coordination with the expert department

Mr. Pfaffmann's work results were always of the highest quality, even in the most difficult cases and under deadline pressure. He was extremely resilient at all times, even in the most difficult situations, and always acted in a calm and considered manner. He always used his very good professional knowledge with excellent success. After only a short time, Mr. Pfaffmann worked completely independently and always reliably. He always showed a very high degree of initiative, great resilience and extreme flexibility in the fulfilment of his tasks. Mr. Pfaffmann always worked to our complete satisfaction in every respect. His behavior towards superiors and colleagues was exemplary at all times.

The fixed-term employment relationship ended on 30.09.2020.

We would like to thank Mr. Pfaffmann for his consistently excellent performance and wish him all the best for his professional and personal future.