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18. abstract The project aims to optimize the production and operation of commercial vehicles across the entire value chain and product lifecycle by using artificial intelligence (AI) and machine learning (ML) in error management. AI-powered models are intended to detect errors early and resolve them efficiently. In doing so, not only are existing optimization potentials identified, but also concrete recommendations for practical implementation are provided. A key component of the project is the development of software demonstrators that address real-world use cases. The provision and analysis of relevant data enable a sound evaluation and improvement of these demonstrators. The continuous exchange between theory and practice supports the targeted application of the latest scientific findings. Over the course of the project, three specific use cases along the value chain were examined: the areas of production, warranty, and field data. Demonstrators were developed for each of these areas and successfully deployed in practice. Moreover, there is potential to extend the developed solutions to other areas of the company. Through close collaboration with DATAbility and IconPro, these solutions could also be of interest to other companies and help increase their efficiency.	
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