

차량 설계 단계 제원 정보를 활용한 만족도 예측 및 평가 항목별 키워드 추출 프레임워크 개발

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Development of a Framework for Road Test Score Prediction and Significant Keywords Extraction based on Vehicle Specification Data

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Specification considered in designing vehicles plays an important role in determining the driving satisfaction along with the performance of a new vehicle. Therefore, the layout and customer evaluations of existing vehicles should be analyzed in the initial architecture design phase and reflected in the package concept validation. In this study, we propose a framework to predict satisfaction and extract keywords for new vehicles using specifications and driving evaluation data of existing vehicles. The proposed framework consists of three modules: predicting item-level impact on evaluation scores of Consumer Report, predicting satisfaction for input specifications based on similar vehicles' evaluation, and analyzing differences in item-level scores through sentiment analysis and keyword extraction. Each module has shown high quantitative and qualitative performance on the evaluation data, and by applying those sequentially, it is expected that the development of the architecture in the early design stages of the vehicle will be more complete.

Keywords: Vehicle Architecture Design, Satisfaction Prediction, Sentiment Analysis