

LITERATURE

The dataset comprises diverse in-vehicle camera images that capture various distracted driving behaviors. It has been carefully curated to support the training and evaluation of our proposed model.

<https://www.kaggle.com/competitions/state-farm-distracted-driver-detection/data>

Research Paper Reference:

Tran et al. introduced a distraction detection system leveraging several deep learning architectures, including VGG-16, GoogleNet, AlexNet, and ResNet. They developed an assisted-driving testbed and created a dedicated distracted driving dataset for their research. Their system demonstrated effectiveness in real-time experiments conducted on the testbed, achieving significant performance improvements over baseline results. The system operates in real-time on a Jetson TX1 embedded board, with a processing frequency range of 8 to 14 Hz and an accuracy between 86% and 92%.

Building on this foundation, our approach incorporates ensemble learning by combining predictions from VGG-16, EfficientNet, and Xception models to achieve improved accuracy.

<https://ietresearch.onlinelibrary.wiley.com/doi/10.1049/iet-its.2018.5172>