The Smart Steering Wheel Cover: Motivating Safe and Efficient Driving

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Abstract
The Smart Steering Wheel Cover is an in-vehicle system designed to enhance driving experiences to be safer and more efficient. It collects data from the driver's smart phone accelerometer to detect how fast the driver is accelerating and braking. The smoothness of the driving correlates with fuel economy: the less aggressive is the driver's behavior, the less fuel the vehicle consumes. The feedback is communicated to the driver in terms of vibration as warning of poor behavior and gradual change of light as a reward to motivate constant fuel-efficient behavior. The physical buttons embedded in the steering wheel cover allow the driver to control their phones straight from the steering wheel without having to compromise safety.

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Figure 1. The Smart Steering Wheel Cover.

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