Road Detection Based on Illuminant Invariance
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- Identifying road pixels is a major challenge due to the intraclass variability caused by lighting conditions. A particularly difficult scenario appears when the road surface has both shadowed and nonshadowed areas
- Proposes a novel approach to vision-based road detection that is robust to shadows

- Contributions:
    - Uses a shadow-invariant feature space combined with a model-based classifier
    - Proposes to use the illuminant-invariant image as the feature space
    - This invariant image is derived from the physics behind color formation in the presence of a Planckian light source, Lambertian surfaces, and narrowband imaging sensors.
    - Sunlight is approximately Planckian, road surfaces are mainly Lambertian, and regular color cameras are near narrowband

- Evaluates on self-recorded data