



**Smart Headlight: A new active augmented reality that improves
how the reality appears to a human**
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Abstract

A combination of computer vision and projector-based illumination opens the possibility for a new type of augmented reality: selectively illuminating the scene to improve or manipulate how the reality itself, rather than its display, appears to a human. One such example is the Smart Headlight being developed at Carnegie Mellon University's Robotics Institute. The project team has been working on a new set of capabilities for the headlight, such as making rain drops and snowflakes disappear, allowing for the high beams to always be on without glare, and enhancing the appearance of objects of interest. This talk will present the idea, approach, and current status of the Smart Headlight Project.

Keywords

Projector, Co-axial projection and imaging, augmented reality