



Anti-Trash



Monitoring Cleanliness of Public Transportation with Computer Vision

Risto Ojala , Tuomas Kinnunen, Joel Mattila, Mikael Aakko

Goal of the Project

- Development of a computer vision unit capable of detecting litter in public vehicles
- Validation of the unit in a self-built test environment
- Dataset gathered with a linearly moving camera and a stationary wide-angle camera



Algorithms

- Background subtraction
- Edge detection
- SIFT keypoints
- Convolutional neural network

Results And Benefits

- Unit capable of detecting litter reliably with an accuracy over 90%
- Potential to apply in real vehicles, improving quality of service
- Clean environment means less diseases and viruses!

