AEOLUS

AI-driven Efficient Object Detection
for Low-power Unmanned Surveillance

LIGHTWEIGHT & EMBEDDED

AI DRIVEN

ADVANCED IMAGE ANALYTICS

SMART
CITY
APPLICATIONS

Republic of Cyprus

RESEARCH
& INNOVATION
FOUNDATION

OBJECTIVES

PROJECT

The AEOLUS project aims to **develop AI-driven object detection models and optimization frameworks for low-power UAVs**, focusing on Smart City surveillance.

Its key innovations include enhancing accuracy and efficiency for real-time performance in diverse scenarios and reducing computational and memory demands for improved power management, enabling cost-effective, real-time applications in urban environments.

SCIENTIFIC

Study of state-of-the-art **model design principles** to create novel architectures, with advanced attention mechanisms, backbones and loss functions

Establish **cutting-edge training and deployment optimization strategies** to develop lightweight AI models

TECHNOLOGICAL

Implement and **evaluate** novel object detection models

Optimized Object detection models for edge deployment with a focus on **computational efficiency** and **reduced memory usage**

Real world pilot scenarios in smart city environments

partners

European University Cyprus

CYRIC

Republic of Cyprus

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