

An aerial photograph of a red lighthouse situated on a rocky pier that extends into the ocean. The sun is low on the horizon, creating a warm, golden glow over the water. The lighthouse is a tall, red, tapered tower with a white base and a lantern room at the top. The pier is made of large, grey rocks and concrete. The sky is a mix of blue and orange, suggesting a sunset or sunrise.

BRIGHTHOUSE

INTELLIGENCE

Project proposals September 2019

The company

Established in Turku in 2015

System integration,
Cyber security,
Connectivity system,
AI and machine vision,
Hardware & software development



TECHNICAL ENABLER FOR AUTONOMOUS SHIPPING

AUTONOMOUS SHIPPING

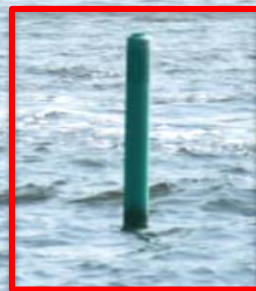


Project proposals



1st case

Recognizing the sea marks
and mapping them to sea
chart



Case Goal

Detecting sea marks with camera.

Using machine vision to recognise familiar sea marks and draw a detection box.

Applying GPS co-ordinates to sea marks on a chart.

Useful skills

Programming (C++, Python)

Interest in Cameras

Interest in Machine vision

Interest in Linux

Secondary skills

OpenCV library, Gstreamer

Mathematics (matrice calculation)

Multi thread programming

Interest in Docker technology

Provided items

Computer or single processor board

High resolution camera

GPS module

Additional hardware, if needed

Technical support and help

2nd case

PTZ camera object
detection



Case Goal

Find a specific object with panorama camera using machine vision

Zoom to object with PTZ camera (Pan, Tilt, Zoom) and take picture

Continue with tracking the object

Useful skills

Programming (C++, Python)

Interest in Cameras

Interest in Machine vision

Interest in Linux

Secondary skills

OpenCV library, Gstreamer

Mathematics (matrice calculation)

Multi thread programming

Interest in Docker technology

Provided items

Computer or single processor board

PTZ-camera and no-zoom camera

Additional hardware, if needed

Technical support and help

Why choose these projects

Opportunity to learn programming,
machine vision, camera related skills.



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