

Mosquito-Vision on SPOT

In this project you will be working on our new robot SPOT. YES, you get to play with the real thing!!!

Most computer vision approaches are computationally expensive and require juicy graphics cards and processors. However, we all know how good mosquitos are in finding human prey despite of being so small and “computationally limited”.

In this project you will implement a mosquito-vision inspired person-detector and compare its performance and power consumption with one of the classic computer vision-based person detectors like YoLo.

You will be able to rely on a huge amount of existing software:

- you will be able to rely on SPOT's SDK for most low-level functions, incl. navigation, arm control, object detection, etc.



- CI/CD pipelines for Gitlab and good docs make implementations fast and smooth.
- You will be able to use SKIROS for easier robot skill modelling and high-level robot skill control.

To do this work, you should have

- **very good python skills.**
- **Good knowledge of linux**
- **done a course in Robotics.**
- **Good knowledge of ROS, the Robotics Operating System. If you really want to do this project and you do not know ROS, then we can provide you with some very good on-line courses. However, you would have to do these ROS courses before(!) you start the project.**
- **Ideally, you have also a good software engineering background.**

Contact:

Volker Krüger	Professor i Datavetenskap	volker.krueger@cs.lth.se
Marcus Stensmyr	Docent i Animal Physiology	marcus.stensmyr@biol.lu.se