

VirtualEye - Life Guard For Swimming Pools To Detect Active Drowning

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Prior Knowledge

One should have knowledge of the following Concepts:

- YOLO v3
- Flask

YOLO v3:

- Setting up and Installing Dependencies using ANACONDA.
- Downloading and Converting YOLOv3 weights into TensorFlow model files.
- How to run detections in real-time on webcam and video.

Flask:

- Flask is a web application framework written in Python
- Flask is based on Werkzeug, WSGI toolkit and Jinja2 template engine. Both are Pocco projects.

Werkzeug:

It is a WSGI toolkit, which implements requests, response objects, and other utility functions. This enables building a web framework on top of it. The Flask framework uses Werkzeug as one of its bases.

WSGI:

Web Server Gateway Interface (WSGI) has been adopted as a standard for Python web application development. WSGI is a specification for a universal interface between the web server and the web applications.

Jinja2:

Jinja2 is a popular templating engine for Python. A web templating system combines a template with a certain data source to render dynamic web pages.

Install virtualenv for development environment:

virtualenv is a virtual Python environment builder. It helps a user to create multiple Python environments side-by-side.

- 1) Install virtualenv.
`pip install virtualenv`
- 2) Once install new virtual environment is created in new folder.
`mkdir newproj`
`cd newproj`
`virtualenv`
`venv`
- 3) On windows, to active.
`venv\scripts\activate`
- 4) Now we can install flask.
`pip install Flask`