



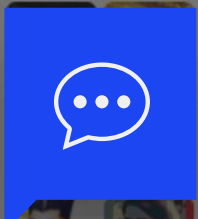
YOLOv4

DATA AUGMENTATION

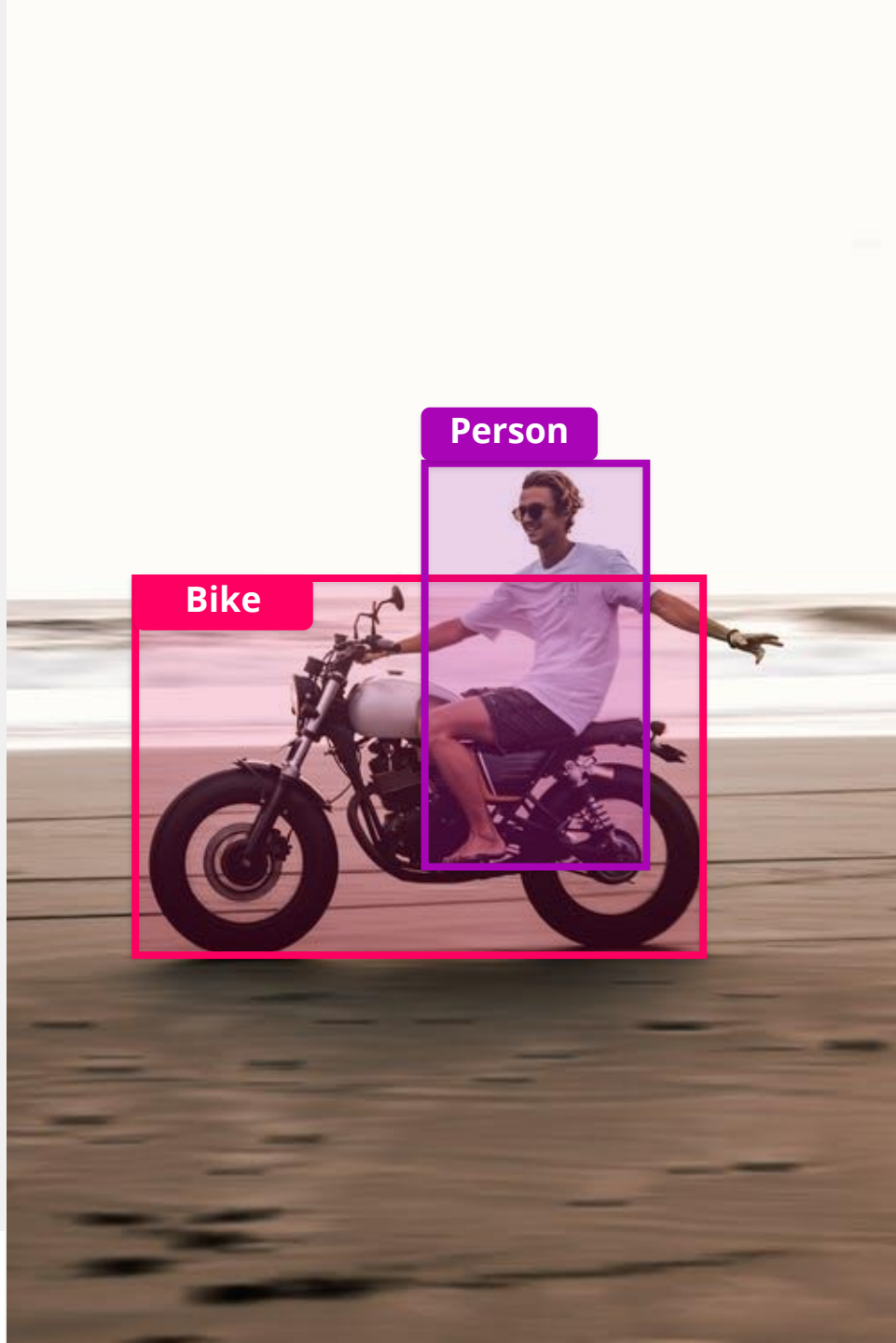
OBJECT DETECTION

COURSE

MODULE 4 – CUSTOM DATASETS



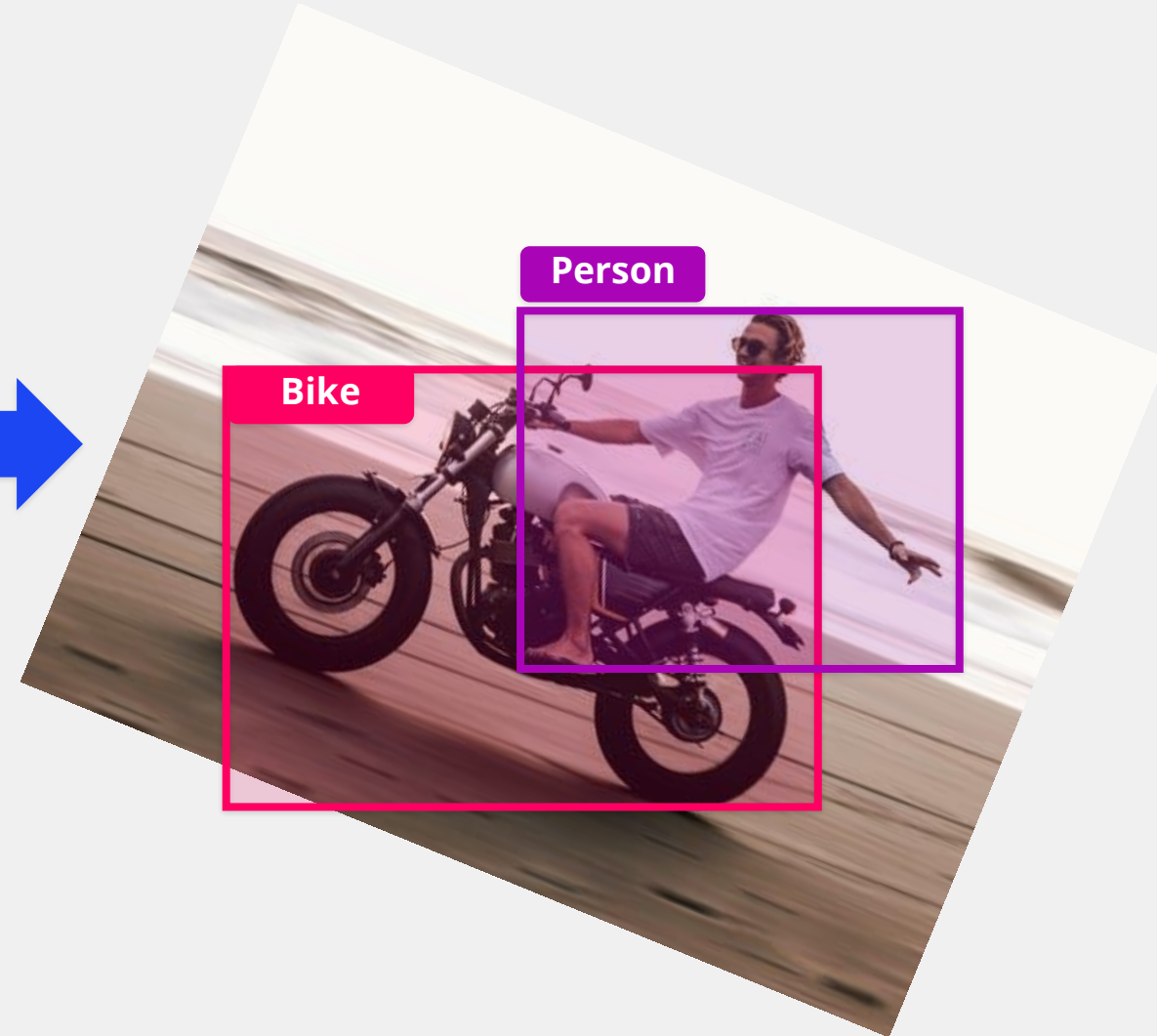
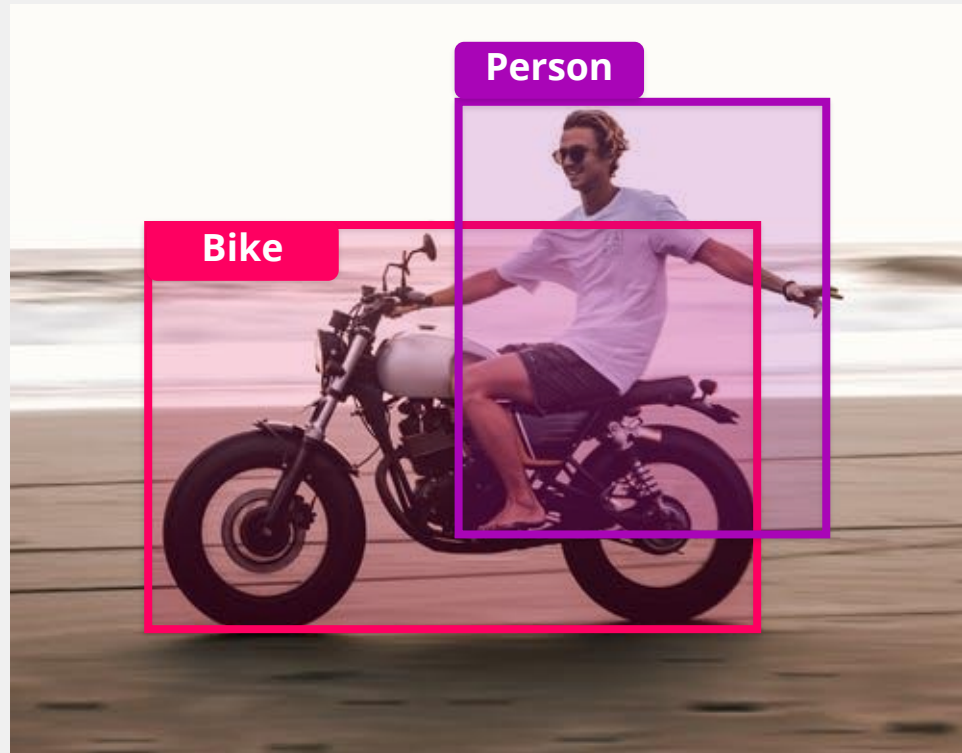
Data Augmentation is a strategy that enables practitioners to significantly increase the diversity of data available for training models, without actually collecting new data.



Data Augmentation Techniques

- **Cropping**
- **Rotating**
- **Padding**
- **Flipping**

Rotational Data Augmentation



Data Augmentation

Instructions for Rotational Data Augmentation

So to get started with the implement, lets head over to GitHub:
Clone and download

<https://github.com/whynotw/rotational-data-augmentation-yolo>

Fill in arguments as shown

```
parser.add_argument("-d",  
                    dest="dataset_input",  
                    help="directory containing data you want to rotate.",  
                    default="data_original")
```

Insert your dataset into the dataset_original folder.
Type in following command:

```
python rotation.py -d data_original
```

Resultant images are in the data_rotational folder



Further Reading



However if your data set consists of images of prescription medications then it makes sense to have a number of orientations as these images could theoretically be in any orientation.



<https://towardsdatascience.com/data-augmentation-experimentation-3e274504f04b>

Data Augmentation

Verify annotations by LabelIMG

So to get started with the implement, lets head over to GitHub:

<https://github.com/tomahim/py-image-dataset-generator>

Clone and download

```
pip install -r requirements.txt
```

Insert your dataset into the dataset folder.

```
python augmentation.py -folder=dataset -limit=1000
```





YOLOv4

DATA AUGMENTATION

OBJECT DETECTION

END

COURSE