# POLYP DETECTION EXERCISE REPORT

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## Introduction

The highest score I achieved on this contest is about 0.73 with the model used here is UnetPlusPlus from library pytorch.segmentation\_models.

Here my github repository: <https://github.com/nzd1001/Polyp-Detection.git>

## Image preprocessing and augmentation

All training images are resized to (256,256) to ensure consistency. Furthermore, here are some transformation techniques that I use:

* Horizontal and vertical flip: randomly flip the image horizontally and vertically
* RandomGamma: randomly adjust the brightness of the image
* RBGShift: randomly adjust values of RGB channels by a small amount
* Normalize: normalize the pixels based on ImageNet standards

## Model Training

Here I use holdout technique to train and evaluate the model. The loss function used here is DiceLoss and the optimizer is Adam. The learning rate at the beginning is 0.001 and a scheduler is used to automatically decrease it if the train loss does not decreased after 5 epochs.

* 1. UnetPlusPlus