CS537 HW2

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- Type of keypoints:
  SURF

- Hyper-parameters of the CNN:

  (Epochs: 100)

```
nn.Conv2d(1, 32, kernel_size=3, padding=1, bias = False),
nn.BatchNorm2d(32, affine=False),
nn.ReLU(),
nn.Conv2d(32, 32, kernel_size=3, padding=1, bias = False),
nn.BatchNorm2d(32, affine=False),
nn.ReLU(),
nn.Conv2d(32, 64, kernel_size=3, stride=2, padding=1, bias = False),
nn.BatchNorm2d(64, affine=False),
nn.ReLU(),
nn.Conv2d(64, 64, kernel_size=3, padding=1, bias = False),
nn.BatchNorm2d(64, affine=False),
nn.ReLU(),
nn.Conv2d(64, 128, kernel_size=3, stride=2, padding=1, bias = False),
nn.BatchNorm2d(128, affine=False),
nn.ReLU(),
nn.Conv2d(128, 128, kernel_size=3, padding=1, bias = False),
nn.BatchNorm2d(128, affine=False),
nn.ReLU(),
nn.Dropout(0.3),
nn.Conv2d(128, 128, kernel_size=8, bias = False),
nn.BatchNorm2d(128, affine=False),
```

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- Two recall-precision curves

one2one --- recall-precision curve

many2mnay --- recall-precision curve