

# Internship Project Topics

## Feature Request for Operators

1. Operator - Backward FC - double differentiation (2nd order)
  - a. Model - WGANs
  - b. Issue - <https://github.com/apache/incubator-mxnet/issues/12529>
2. Statistical Operators (numpy - mean, variance, Std) ON HOLD since no apparent need
  - a. Issue - <https://github.com/apache/incubator-mxnet/issues/12319>
3. randint (eric haibin lin) -
  - a. Issue - <https://github.com/apache/incubator-mxnet/issues/11218>
4. FFT operator extension to 2D arrays
  - a. Issue - <https://github.com/apache/incubator-mxnet/issues/11279>
5. SoftmaxCrossEntropyLoss enhancement:
  - a. <https://github.com/apache/incubator-mxnet/issues/10799>

## Deep Engine team (Q3 requirement) (mail from Lin)

- Upsampling
- Hardmax

## GPU FP16 -

1. InstanceNorm - <https://github.com/apache/incubator-mxnet/issues/12302>
2. SyncBatchNorm (Hao working on it) - <https://github.com/apache/incubator-mxnet/issues/12257>

## Operators for debugging:

- <https://github.com/apache/incubator-mxnet/issues/12623>
- <https://github.com/apache/incubator-mxnet/issues/9721>