Project Plan

Goal

Following operators supported

1	Operator	Current Status	Solution	Impact	Link	POC/Source	Action Nature	Estimated Time (weeks)
2	Hardmax	Use reshape, eye,argmax ops			https://issues.apache.org/jira/browse/MXNET-376	Vandana, Hao	New	3
3	Upsampling	Use BiLinearResize2D – causing Nearest Neighbour export/import to not be supported	Different scale per dimension		https://issues.apache.org/jira/browse/MXNET-376	Vandana	Enhancement	2
4	Randint	WA - use random_uniform with float32/64. Issue - limiting and confusing		More than 2 users (Amazon Music, NLP)	https://github.com/apache/incubator-mxnet/issues/11218	Manu	New	2
5	Constant Initializer with NDArray	WA - Convert to list and then to NDArray			User Study	Sandeep	Enhancement	2
6	Debug Operators	None			https://github.com/apache/incubator-mxnet/issues/12623	Haibin	Enhancement	2
7	MaxPool	Same pad in 1D					Bug fix	
8	Correlation	Kernel Size check					Bug fix	
9								
	A	B	C	D	E	F	G	H

Deliverable

1. Operator implementation and Unit Tests
2. Example (Documentation in Source Code)
3. Blog post (end-to-end implementation of ___ model)

Milestones

FIRST HALF

1. Implement and give examples of
    a. Constant Initializer with ND

  b. Debug operator

  c. RandInt operator (stretch goal)

 2. Bug fixes in Github issues

SECOND HALF

 1. Implement and examples of

  a. Hardmax operator (stretch goal)

  b. Upsampling across all Dimensions

 2. Build and evaluate model(s) that utilize these operators

 3. Blog post

Week 15

- Final presentation
- Blog post
- Pending model building + evaluation

Week 14

- Model building

Week 13

- Model building

Week 12

- Models for 1 or more operators (combined or individual)

Week 11

- Hardmax operator (understand, implement)

Week 10

- Upsampling work (continued)

Week 9

- Pending operators of first half
- Upsampling across all dimensions
  - Understand - Currently upsampling uniformly
  - Figure out solution

Week 8

- Wrap up with example and implementation of all 3
- **<u>Mid-intern Presentation</u>**

Week 7

- Rand Int (continued and finish up)

Week 6

- Debug (continued and finish up)
- Rand Int
  - Understand problem
  - Work on solution

Week 5

- Constant initializer with ND Array (if pending)
- Debug operator
  - Understand problem
  - Work on solution

Week 4

- Constant initializer with ND Array
  - Understand problem
  - Come up with solution
  - Implement