Research Meeting Agenda

1 Feb 15

**Updates**

* CSCE 525 Paper abstract accepted for ECCWS, waiting on PA approval for paper
* CDN Workstation set up, can ping DL/ML boxes
* Working on pushing a benchmark to them from mlperf to run

Log File Synthesis Paper

* Generation Method
  + Data Points are single log lines
  + Run Log Line Clustering to build clusters and then assign log lines to clusters
  + Select clusters from candidates
  + Model clusters as Markov chains
* Evaluation Method
  + Mean Coverage rate of clustering algorithm
  + Number of Outliers
  + Number of Clusters
  + These metrics evaluated on semi-synthetic data & reference logs

Generative Model for Category Text Generation

* Uses SGD as optimization method
* Mapped to real interval with softmax function
* Generation Method
  + Long Short-Term Memory (LSTM) w/classifier
  + RNN & RL as discriminator & classifier
* Evaluation Method
  + Negative Log-likelihood
  + Classification results on synthetically generated sentences

Adversarial Feature Matching for Text Generation

* Optimization technique is to minimize a NN-based MMD distance of real data distribution & synthetic data distribution
* Evaluate with BLEU score & Kernel Density Estimation

Other Optimization Techniques

* Linear Regression/Logistic Regression
* K-means for clustering & Support Vector Machines