GCUT: (Producing Fig 13)

* A prediction task: predicting the end event type (The reason that the task finishes)
* Number of classes: 4
* Timestamp: different tasks may have different # of measurement records.
* They uniformly sampled a subset of 100,000 tasks and used their corresponding measurement records to form our dataset.
* The maximum measurement length in this dataset is 2497, however, 97.06% of samples have a length within 50
* There are 4 dataset splits : real dataset (training and test) + generated dataset (training and test); generated test dataset are not used at all.
* Each of these 4 splits has two arrays: (features) and (attributes/classes)
* Every feature array has a shape of (50000, 2500, 9) and every attribute array is (50000, 4).
* Features/Measurements: CPU rate, Max CPU rate, sampled CPU usage, canonical memory usage, assigned memory usage, maximum memory usage, unmapped memory cache, total page cache, local disk space usage.
* Metrics used to evaluate: Accuracy
* Jupyter Notebook Dir: '/rdata/yelnady/DoppelGANger'
* Generated Data Config: aux\_disc-False,dataset-google,epoch-400,epoch\_checkpoint\_freq-1,extra\_checkpoint\_freq-5,run-2,sample\_len-5,self\_norm-False,
* Tensorflow: MLP: One Dense Layer(128, activation='relu'), optimizer = Adam(learning\_rate=0.001), loss='categorical\_crossentropy
* sklearn: Naive Bayes: GaussianNB(), LogisticRegression: LogisticRegression(), Decision Trees: DecisionTreeClassifier(), Linear SVM: LinearSVC()
* **Accuracy of the predictor using MLP (1 layer):**
  + **Real Data Only (50\_000 sample): 0.797**
  + **Real Data (100%) + Generated Data (100%): 0.778**
  + **Real Data (20%) + Generated Data (100%): 0.749**
  + **Real Data (10%) + Generated Data (100%): 0.730**
  + **Real Data (5%) + Generated Data (100%): 0.745**
  + **Real Data (1%) + Generated Data (100%): 0.67**
  + **Generated Data Only (50\_000 sample): 0.637**
* Results:

