**PROJECT PROPOSAL : TEAM 4**

* Azure has an option to upload the machine learning algorithms as custom inputs which can later be put up as a web service
* The inputs in the R script can be made as variables
* These can be ingested in the scripts
* Locally: .bar file,.xml file, .json file
* Web: through a UI eg. REST api web service

Steps would be as follows:

Training exp

Predictive Experiment

Set up web service

Operational Services

Deploy web service

* Trained modules will be used as building blocks in the platform being used.
* The steps involved are
  + Loading Data: txt, .xls, etc
  + Split/Cleaning Data: R script, UI for same
  + Algorithms: R scripts as black boxes
  + Scoring: Check the predictability/ classification
* Use: Boosting, Decision Trees, Scoring, Evaluation
* Conversion to Web Services:
  + Change training experiment to definite or predictive experiment
  + Remove intermediary SVMs/Decision Trees
  + Deploy web service
  + Web service has to be configured
    - For logging information/data
* Data Services
  + - Variables to be open for ingesting in script (Example number of trees in KMean Clustering)
    - Handle scaling in terms of concurrency
    - End points
  + Inputs the model or service can take
  + Outputs the model can give

**WORKFLOW DESIGN**

**AZURE BUILDING BLOCKS**

**-**ingest the data into the azure experiment

**MIDDLE TIER RESTful Web Service**

-exchange in JSON format, parameters from UI

**UI to control [HTML, CSS, AJAX]**

-ML algo (Classification, Clustering, etc)

-Mode (KNN, Random Forest)

-Parameters to each model (number of Clusters, distance measure, etc)