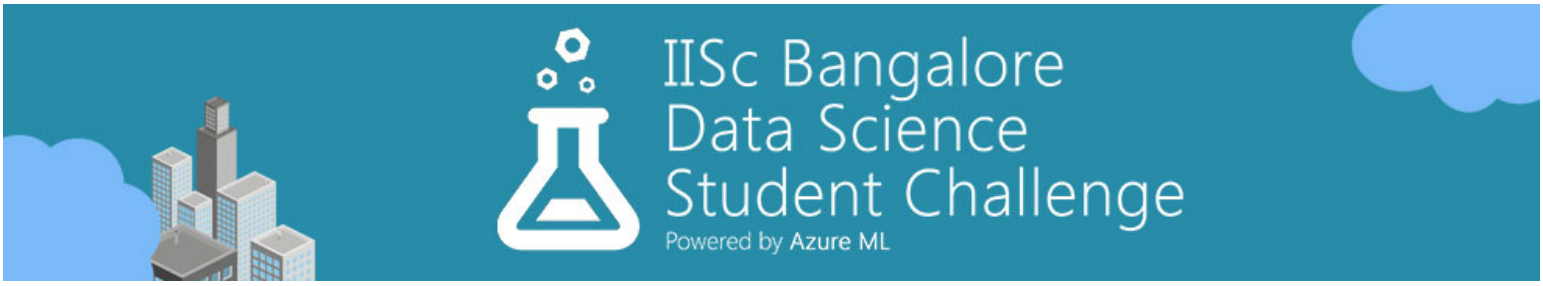



# Hackathon Challenge Statement

(this document is also available at fb.com/dsschack)

**Theme:** Hack & develop an innovative data science solution to help make India a smart country while demonstrating the use of Azure Machine Learning, Microsoft's data science tool.

**Challenge Option 1:** Health Care

- Hack, Discover, visualize, showcase insights or even build a predictive application for disease occurrence based on factors such as health history, time of year, income or tax info, neighborhood, type of job, birth weight or even your name!

**Challenge Option 2:** Good living

- Hack, Discover, visualize, showcase insights or even build an application to predict indicator of living standards of a neighborhood based on factors such as recreation facilities, population of county, crime/safety ratings, income of neighborhood, or traffic congestion.

**Challenge Option 3:** Green Neighborhood

- Hack, Discover, visualize, showcase insights or even build an application to predict energy consumption of a neighborhood based on variables such as population, recreation facilities, or income levels.

**Challenge Option 4:** Freestyle

- Be creative – build any innovative data science solution! The only condition is that one dataset must be pulled from https://data.gov.in/

Please note

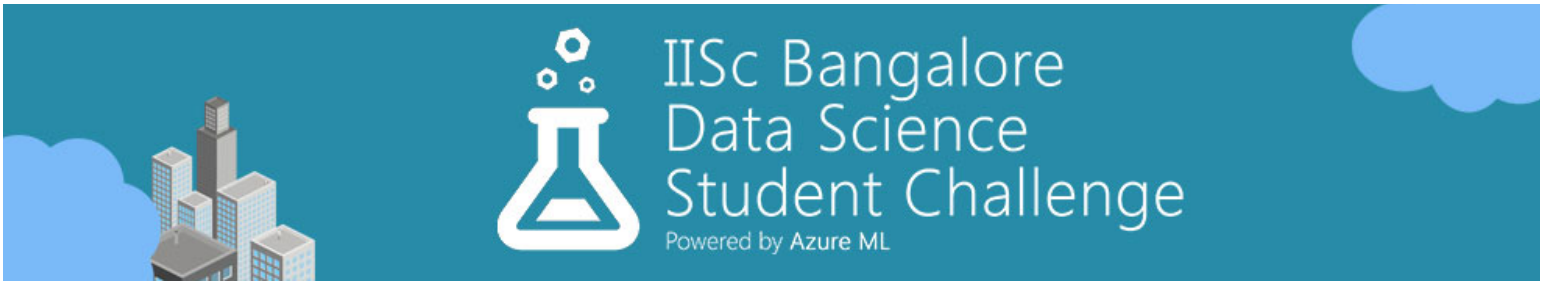
- Multiple datasets may be combined together for each challenge.
- Azure Machine Learning information given in links below
- Team size of 3-5 is allowed.
- Only participants demonstrating use of Azure ML will qualify for prizes. Other participants are free to present their results.

**Useful Azure ML Resources**

Access to Azure ML and getting Started documentation
https://studio.azureml.net/

AML Tutorial for data scientists :
https://gallery.cortanaanalytics.com/Experiment/Tutorial-for-Data-Scientists-3

Data science algorithm cheat sheet :
https://azure.microsoft.com/enus/documentation/articles/machine-learning-algorithm-cheat-sheet/




Basic experiment showing use of AML with Python
https://gallery.cortanaanalytics.com/Experiment/Cortana-Conf-CA-Milk-Python-1?fromlegacydomain=1
https://github.com/Quantia-Analytics/Cortana-Data-Science-Example-Python

Basic experiment showing use of AML with R
https://azure.microsoft.com/enus/documentation/articles/machine-learning-r-quickstart/

Useful tips on python and r packages for Azure ML
https://microsoft-my.sharepoint.com/personal/akannava_microsoft_com/_layouts/15/WopiFrame.aspx?sourcedoc={2C2E5F49-0904-42DE-A3C6-98A593DDB6D6}&file=Getting%20Started%20with%20Azure%20ML&action=default&d=w2c2e5f49090442dea3c698a593ddb6d6&RootFolder=%2fpersonal%2fakannava%5fmicrosoft%5fcom%2fDocuments%2fShared%20with%20Everyone%2fGetting%20Started%20with%20Azure%20ML

**Useful Azure Machine Learning Resources**

1. Access to Azure ML and getting Started documentation : https://studio.azureml.net/
2. AML Tutorial for data scientists : https://gallery.cortanaanalytics.com/Experiment/Tutorial-for-Data-Scientists-3
3. Data science algorithm cheat sheet : https://azure.microsoft.com/en-us/documentation/articles/machine-learning-algorithm-cheat-sheet/
4. Basic experiment showing use of AML with Python
   https://gallery.cortanaanalytics.com/Experiment/Cortana-Conf-CA-Milk-Python-1?fromlegacydomain=1
   https://github.com/Quantia-Analytics/Cortana-Data-Science-Example-Python
5. Basic experiment showing use of AML with R https://azure.microsoft.com/en-us/documentation/articles/machine-learning-r-quickstart/
6. Importing data into excel : Import Azure ML data into Excel , Video for PQ in Excel
7. Useful tips on python and r packages for Azure ML
   https://microsoft-my.sharepoint.com/personal/akannava_microsoft_com/_layouts/15/WopiFrame.aspx?sourcedoc={2C2E5F49-0904-42DE-A3C6-98A593DDB6D6}&file=Getting%20Started%20with%20Azure%20ML&action=default&d=w2c2e5f49090442dea3c698a593ddb6d6&RootFolder=%2fpersonal%2fakannava%5fmicrosoft%5fcom%2fDocuments%2fShared%20with%20Everyone%2fGetting%20Started%20with%20Azure%20ML