**Objectives:** To become familiar with software tools available for data management. To explore the software tools, frameworks for real world applications by designing the modules. To become familiar with the functionalities provided by the data analysis tools, framework. To make a comparison of data management tools based on their applicability and limitations.

Following are suggested tools/libraries.

- Python Libraries (StatsModels, Pandas, Scikit-learn, Keras, PyTorch, TensorFlow, Matplotlib, Seaborn, Altair, Plotly)
- Visualization using Tableau, PowerBI
- Hadoop, Pg, Hive, MomgoDB
- Apache Spark and Stor

In each of above framework/tool/library, minimum 3 applications are to be developed. The applications are developed in such a way as to cover maximum functionalities provided by particular framework/tool/library.