**2023 TCU Analytics Academy Camp**

**Python Library Descriptions**

**What is NumPy in Python used for?**

NumPy can be used to perform a wide variety of mathematical operations on arrays. It adds powerful data structures to Python that guarantee efficient calculations with arrays and matrices and it supplies an enormous library of high-level mathematical functions that operate on these arrays and matrices.

**Pandas**

Pandas is an open-source Python package that is most widely used for data science/data analysis and machine learning tasks. It is built on top of another package named Numpy, which provides support for multi-dimensional arrays.

**Scipy Stats**

This module contains a large number of probability distributions, summary and frequency statistics, correlation functions and statistical tests, masked statistics, kernel density estimation, quasi-Monte Carlo functionality, and more

**What is meant by Matplotlib in Python?**

Matplotlib is a comprehensive library for creating static, animated, and interactive visualizations in Python. Matplotlib makes easy things easy and hard things possible.

**What is the difference between Pyplot and Matplotlib?**

Matplotlib is the whole package; matplotlib. pyplot is a module in Matplotlib, and PyLab is a module that gets installed alongside Matplotlib. PyLab is a convenience module that bulk imports matplotlib. pyplot (for plotting) and NumPy (for Mathematics and working with arrays) in a single name space.

**Plotly**

Overview. The plotly Python library is an interactive, open-source plotting library that supports over 40 unique chart types covering a wide range of statistical, financial, geographic, scientific, and 3-dimensional use-cases.