SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING

Department of Mathematics and Computer Science, Prasanthi Nilayam

This is to certify

Sai Nandan Desetti

for attending the 45 Hour duration training workshop on

Hands-on Predictive Analytics with Python

and successfully completing 5 hands-on python projects on real-world data at

Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam Campus,

as part of the Department of Mathematics and Computer Science program 2020-2021.

Dr. R. Raghunatha Sarma
A. Head, Department of Mathematics and
Computer Science, SSSIHL

Satya Sai Mudigonda
Sr. Tech Actuarial Consultant, AIAI, CPCU, PMP
Member Number #328

SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING

Workshop Topics

- 15 Hours of Practical Lectures
- 15 Hours of Group Projects
- 15 Hours of Assessment

Topic 1 - Introduction to Data

- Python - Numpy and Pandas
- Python - Data Visualization with seaborn and matplotlib
- Types of data
- Handling missing data
- Data encoding and Feature Scaling
- Handling data imbalance

Topic 2 - Introduction to ML - Regression Models

- Simple linear regression
- Multiple linear regression
- Polynomial regression
- Decision tree regression
- Random forest regression
- Evaluation of regression models

Topic 3 - Introduction to ML - Classification Models

- K- Nearest Neighbors
- Decision tree classification
- Random forest classification
- Gradient Boosting classification
- Evaluation of classification models

Topic 4 - Introduction to ML - Unsupervised Learning

- Clustering
- K-means clustering
- Hierarchical clustering
- DBSCAN clustering
- Principal Component Analysis

Topic 5 - Introduction to Deep Learning Methods

- Intro to Artificial Neural Networks
- Intro to Convolutional Neural Networks
- Intro to Recurrent Neural Networks

Resource Persons:
S R Pranav Sai (PhD Actuarial Science)
Rohan Yashraj Gupta (PhD Actuarial Science)
Lalith Srikanth (PhD Computer Science)