PYTHON FOR DATA SCIENCE

PROF. RAGHUNATHAN RENGASAMY  TYPE OF COURSE : Rerun | Elective | UG
Department of Chemical Engineering  COURSE DURATION : 4 weeks (26 Jul’ 21 - 20 Aug’ 21)
IIT Madras  EXAM DATE : 26 Sep 2021

PRE-REQUISITES : Knowledge of basic data science algorithms
INTENDED AUDIENCE : Final Year Undergraduates
INDUSTRIES APPLICABLE TO : Honeywell, ABB, Ford, Gyan data pvt. Ltd.

COURSE OUTLINE :
The course aims at equipping participants to be able to use python programming for solving data science problems

ABOUT INSTRUCTOR :
Prior to joining IIT Madras as a professor, Prof.Rengaswamy was a professor of Chemical Engineering and Co-Director of the Process Control and Optimization Consortium at Texas Tech University, Lubbock, USA. He was also a professor and associate professor at Clarkson University, USA and an assistant professor at IIT Bombay. His major research interests are in the areas of fault detection and diagnosis and development of data science algorithms for manufacturing industries.

COURSE PLAN :
Week 1: Basics Of Python Spyder (Tool)
Week 2: Sequence data types and associated operations
Week 3: Pandas data frame and data frame related operations on Toyota Corolla dataset
Data visualization on Toyota Corolla dataset using matplotlib and seaborn libraries
Control structures using Toyota Corolla dataset
Week 4: CASE STUDY-Regression, Classification