Machine Learning And Deep Learning Masters

Instructors:

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Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

Sudhanshu Kumar:

Having 8+ years of experience in Big data, Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

Curriculum:

Course Introduction

• Introduction of Data science and its application in Day to Day life

• Course overview and Dashboard description

Python Core

• Introduction of python and compari s on with other Preview

• Programming language

• Installation of Anaconda Distribution and other python

• IDE Python Objects, Number & Booleans, Strings Preview

• Container objects, Mutability of objects

• Operators Arithmetic, Bitwise, C omparison and Assignment o perators, Operators Precedence and associativity

• Conditions(If else,if elif else) Loops(While ,for)

• Break and Continue statement and Range Function.

String Objects and collections

• String object basics

• String methods

• Splitting and Joining Strings

• String format functions

• List object basics

• List as stack and Queues

• List comprehensions

Tuples,Set ,Dictionaries Functions

• Tuples,Sets Dictionary Object basics, Dictionary Object methods, Dictionary View Objects.

• Functions basics, Parameter passing, Iterators Generator functions

• Lambda functions

• Map , Reduce, Filter functions

OOPS concepts Working with Files

• OOPS basic concepts

• Creating classes and Objects Inheritance

• Multiple Inheritance

• Working with files

• Reading and writing files

- Buffered read and write

- Other File methods

Exception Handling

- Exceptions Handling with Try except

Api

- Flask introduction

- Flask Application

- Open linkFlask

- App RoutingFlask

- URL BuildingFlask

- HTTP MethodsFlask

Database

- Mongo DB SQL

- Lite python SQL

Python pandas Modules

- Python Pandas Series

- Python Pandas DataFrame

- Python Pandas Panel

- Python Pandas Basic functionality

Python Numpy

- NumPy Ndarray Object

• NumPy Data Types

• NumPy Array Attributes

• NumPy Array Creation Routines

• NumPy Array from Existing

• Data Array From Numerical Ranges

• NumPy Indexing & Slicing

• NumPy Advanced Indexing

• NumPy Broadcasting

• NumPy Iterating Over Array

• NumPy Array Manipulation

• NumPy Binary Operators

• NumPy String Functions

• NumPy Mathematical Functions

• NumPy Arithmetic Operations

• NumPy Statistical Functions

• Sort , Search & Counting Functions

• NumPy Byte Swapping

• NumPy Copies Views

• NumPy Matrix Library

• NumPy Linear Algebra

Exploratory Data Analysis

• Feature Engineering and Selection

• Building Tuning and Deploying Models

• Analyzing Bike Sharing Trends

- Analyzing Movie Reviews Sentiment

- Customer Segmentation and Effective Cross Selling

- Analyzing Wine Types and Quality

- Analyzing Music Trends and Recommendations

- Forecasting Stock and Commodity Prices

Statistics

- Descriptive Statistics

- Sample vs Population statistics Random Variables

- Probability distribution function Expected value

- Binomial Distribution

- Normal Distribution z score

- Central limit Theorem

- Hypothesis testing Z Stats vs T stats

- Type 1 type 2 error

- Confidence interval

- Chi Square test

- ANOVA test

- F stats

Machine Learning 1

- Introduction

- Supervised , Unsupervised, Semi supervised, Reinforcement Train , Test, Validation Split

- Performance Overfitting , underfitting OLS.

- Linear Regression assumption.

- R square adjusted

- R square Intro to Scikit learn

- Training methodology

- Hands on linear regression

- Ridge Regression

- Logistics regression

- Precision Recall ROC curve

- F Score

Machine Learning 2

- Decision Tree Cross

- Validation Bias vs Variance

- Ensemble approach Bagging

- Boosting Randon

- Forest Variable Importance

Machine Learning 3

- XGBoost

- Hands on XgBoost

- K Nearest Neighbour

- Lazy learners

- Curse of Dimensionality

- K NN Issues

- Hierarchical clustering K Means

- Performance measurement

- Principal Component analysis

- Dimensionality reduction

- Factor Analysis

Machine Learning4

- SVR

- S V M

- Polynomial Regression

- Ada boost

- Gradient boost

- Gaussian mixture

- Anamoly detection

- Novelty detection algorithm Stacking

- K NN regressor

- Decisson tree regressor DBSCAN

Natural Language Processing

- Text Ananlytics

- Tokenizing , Chunking

- Document term

- Matrix TFIDF

- Sentiment analysis hands on

Spark

- Spark overview.

- Spark installation.

- Spark RDD.

- Spark dataframe .

- Spark Architecture.

- Spark Ml lib.

- Spark Nlp

- Spark linear regression.

- Spark logistic regression.

- Spark Decision Tree.

- Spark Naive Bayes

- Spark xg boost

- Spark time series.

- Spark Deployment in local server

- Spark job automation with scheduler.

Deep Learning

- Deep Learning Introduction.

- Neural Network Architecture.

- Loss Function.

- Cost Function.

- Optimizers.

- CNN architecture.

- Build First Classifier in CNN.

- Deploy Classifier over cloud.

- RNN overview.

• GRU.

• LSTM.

• Time Series using RNN LSTM.

• Customer Feedback analysis using RNN LSTM.

Time Series

• Arima

• Sarima .

• Auto Arima

• Time series using RNN LSTM .

• Prediction of NIFTY stock price.

Deployment

• Deployment of all the project In cloudfoundary , AWS AZURE and Google cloud platform

• Expose api to web browser and mobile application retraining a pproach of Machine learning model

• Devops infrastructure for machine learning model

• Data base integration and scheduling of machine learning model and retraining c ustom machine learning training approach.

• AUTO ML

• Discussion on infra cost and data volume

• P rediction based on streaming data

Extra session

• Discussion on project explanation in interview

• Data scientist roles and responsiblities

• Data scientist day to day work

• Companies which hire a data scientist

• Resume discussion with our team one to one

Tableau and power Bi self placed session

• Business Intelligence (BI) Concepts.

• Microsoft Power BI (MSPBI) introduction.

• Connecting Power BI with Different Data sources.

• Power Query for Data Transformation.

• Data Modelling in Power BI.

• Reports in Power BI Reports and Visualisation types in Power BI.

• Dashboards in Power BI.

• Data Refresh in Power BI.

• Traditional Visualisation(Excel) vs Tableau.

• About Tableau.

• Tableau vs Other BI Tool Pricing.

Tableau Interview Questions

Python project

• Web crawlers for image data sentiment analysis and product review sentiment analysis

• Integration with web portal

• Integration with rest a A pi W eb portal and Mongo DB on Azure

• Deployment on web portal on Azure

• Text mining

- Social media data churn

Chatbot Project

- Chatbot using Microsoft Luis

- Chatbot using google Dialog flow

- Chatbot using Amazon Lex

- Chatbot using Rasa NLU

- Deployemnt of chatbot with web , Telegram , Whatsapp , Skype

Machine learning project

- Healthcare analytics prediction of medicines based on FIT BITband

- Revenue forecasting for startups

- Prediction of order cancellation at the time of ordering inventories.

- Anamoly detection in inventory packaged material.

- Fault detection in wafferes based on sensordata

- Demand forecasting for FMCG product.

- Threat identification in security system.

- Defect detection in vehicle engine.

- Food price forecasting with Zomato dataset.

- Fault detection in wafferes based on sensor data.

- Cement_Strength _ reg.

- Credit Card Fraud.

- Forest_Cover_Classification .

- Fraud Detection.

- Income Prediction.

• Mushroom classifier., Phising Classifier , Thyroid_Detection .

• Visibility climate.

Deep Learning projects

• Customer Feedback analysis using RNN LSTM.

• Family member detection.

• Industry financial growth prediction.

• Speech recognization based attendance system.

• Vehicle Number plate detection and recognition system.

Tableau and power Bi Projects

• Project 1. Project Sales.

• Project 2. Financial Report.

• Project 3. HealthCare.

• Project 4. Procurement Spend Analysis.

• Project 5. Human Resource Tableau