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Preparation of a Depth Schedule on Data Science by Colon Classification, Edition 7

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Abstract :- Preparation of a Depth version is required when a micro subject has emerged as a popular and important subject of study. The subject Data Science is such a subject under consideration for preparation of a Depth Schedule. The Colon Classification, edition 7 of Ranganathan is a suitable classification scheme to classify the above mentioned subject thoroughly because of the inbuilt flexibility of Colon Classification, edition 7. Through this article an attempt has been made to prepare a Depth Schedule as far as possible.

Keywords :- Depth Schedule, Colon Classification, Data Science, Cybernetics

Introduction:- Depth Schedule is such a Classification schedule of micro subject constructed maintaining the canon of classification, postulates of classification, principle of facet sequence and isolate sequence in an array. The Colon Classification, edition 7 provides a small schedule of basic classes. The isolates going with each facet in different basic classes are given. In addition, the common isolates are also listed. Hence the class numbers are not enumerated but have to be constructed. The indicator digits serve as nuts and bolts. The newest term is "Data Science" which became popular after 2010. It refers to professionals who know contemporary algorithms and methods for data analysis as well as Classical Statistics and can implement gathering, analyses, reporting and storage of "Big Data" using current technologies such as Artificial Intelligence.

Objective:- The objective of this paper is to prepare a Depth Schedule on the subject Data Science as this subject has been emerged as an important subject.

Methodology:- This paper has been prepared based upon the consultation of the subject Data Science and Colon Classification, edition 7. Many literatures have been consulted for this purpose to derive the actual terminologies related to Data Science. The subject may belong to Mathematics or Computer Science. Since there is no basic subject on Computer Science so the subject Cybernetics under the basic subject Mathematics has been chosen for this purpose.

Depth Schedule:-

B Mathematics

BV Cybernetics

Schedule of (1P1)

Factor isolates

OZ By Factor

- 2 Information Transmission
- 211 Big Data Cloud Platform
- 212 Power of Cluster of Computers
- 213 Evolution of Cluster Computing
- 2131 Hadoop
- 2132 Spark
- 214 Cloud Environment
- 2141 Open Account and creation of a Cluster
- 2142 R Notebook
- 2143 Markdown Cells
- 215 Leverage Spark using R Notebook
- 216 Databases and SQL
- 2161 Databases, Table and View
- 2162 Basic SQL Statements
- 2163 Advanced Topics in Databases
- 5 Control System**
- 51 Data Pre- Processing
- 511 Data Cleaning
- 512 Missing Values
- 513 Input Missing values with median/mode
- 514 K – nearest neighbors
- 515 Bagging Tree
- 52 Centering and Scaling
- 53 Resolve Skewness
- 54 Resolve Outliers
- 55 Co linearity

56	Sparse Variables
57	Re- encode Dummy Variables
58	Data Wrangling
581	Summarize Data
582	Tidy and Reshape Data
8	Model
81	Model Tuning Strategy
811	Variance—Bias Trade off
812	Data Splitting and Re sampling
8121	Data Splitting
8122	Re sampling
82	Measuring Performance
821	Regression Model Performance
822	Classification Model Performance
8221	Confusion Matrix
8222	Kappa Statistics
8223	ROC
8224	Gain and Lift Charts
83	Regression Models
831	Ordinary Least Square
8311	The Magic P- Value
8312	Diagnostics for Linear Regression
84	Principal Component Regression and Partial Least Square
85	Regularization Methods
851	Ridge Regression
852	LASSO

853	Variable selection property of LASSO
854	Elastic Net
855	Penalized Generalized Linear Model
86	Tree- Based Methods
861	Tree Basics
862	Splitting Criteria
863	Tree Pruning
864	Regression and Decision Tree Basic
8641	Regression Tree
8642	Decision Tree
865	Bagging Tree
866	Random Forest
87	Gradient Boosted Machine
871	Adaptive Boosting
872	Stochastic Gradient Boosting
873	Boosting as Additive Model
88	Deep Learning
881	Projection Pursuit Regression
882	Feed Forward Neural Network
8821	Logistic Regression as Neural Network
8822	Stochastic Gradient Descent
8823	Deep Neural Network
8824	Activation Function
8825	Optimization
8826	Deal with over fitting
8827	Image Recognition using FFNN

- 883 Convolution Neural Network
- 8831 Convolution Layer
- 8832 Padding Layer
- 8833 Pooling Layer
- 8834 Convolution Over Volume
- 8835 Image Recognition using CNN
- 884 Recurrent Neural Network
- 8841 RNN Model
- 8842 Word Embedding
- 8843 Long Short Term Memory
- 8844 Sentiment Analysis using RNN

This is the end of the Depth Schedule on Data Science.

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