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| **Cape Gemini Big Data Analyst** | | | | | | | |
| College Name: Saranathan college of Engineeirng | | |  |  | Start Date | 08.01.2024 | |
| Trainer Name: Mr.Vijaya Murugan | | |  |  | End Date | 31.01.2024 | |
| **S.No** | **Module** | **Topic** | **Subtopic** | **Methodology** | **Duration (hh :**  **mm)** |  |  |
| **Part 1 - Python Analytics - 3 Formative Assessment - (120 Hrs)** | | | | | **120** | Date | Signature |
|  | Python Fundame ntals | Python Introduction | Python introduction | Lecture, Discussion | 2 |  |  |
| Installing Anaconda, Variables and Constants, Datatypes | Lecture, Discussion, Hands on | 2 |  |  |
| Array implementation, File  Methods | Lecture, Discussion,  Hands on | 2 |  |  |
| Keywords and Identifiers | Lecture, Discussion,  Hands on | 2 |  |  |
| Control Structures and Loops | Lecture, Discussion,  Hands on | 2 |  |  |
| Python Data Structures | List, Tuples and its operations | Lecture, Discussion,  Hands on | 2 |  |  |
| Sets, Dictionaries and its  operations | Lecture, Discussion,  Hands on | 2 |  |  |
| String and String manipulation  functions | Lecture, Discussion,  Hands on | 2 |  |  |
| Python Directory and File  management system | Lecture, Discussion,  Hands on | 2 |  |  |
| Python Scope | Global, Local and Non local  variables | Lecture, Discussion,  Hands on | 2 |  |  |
| Global Keywords and Namespaces | Lecture, Discussion,  Hands on | 2 |  |  |
| OOPS Concepts in python | Classes and Objects | Lecture, Discussion,  Hands on | 2 |  |  |
| Inheritance and Multiple  Inheritance | Lecture, Discussion,  Hands on | 2 |  |  |
| Function and Operator  Overloading. | Lecture, Discussion,  Hands on | 2 |  |  |
| File Handling in python | Input Output and Import  operations | Lecture, Discussion,  Hands on | 2 |  |  |
| Read and Write operations in file | Lecture, Discussion,  Hands on | 2 |  |  |
| Shallow copy and Deep copy | Lecture, Discussion,  Hands on | 2 |  |  |
| Special functions | Iterators, Generators and  Decorators | Lecture, Discussion,  Hands on | 2 |  |  |
| Recursion and Lamda functions | Lecture, Discussion,  Hands on | 2 |  |  |
| Regular expression | Lecture, Discussion,  Hands on | 2 |  |  |
| xception Handling in pytho | Errors and Exceptions, Try, Except and Finally, User Defined Exceptions | Lecture, Discussion, Hands on | 2 |  |  |
| **Stage 1 - Revision** | | | **1** |  |  |
| **Formative Assessment 1** | | | **1** |  |  |
|  | Numpy | Introduction to NUMPY and its  basic operations | Lecture, Discussion,  Hands on | 4 |  |  |
| Numpy mathematical functions | Lecture, Discussion,  Hands on | 5 |  |  |
| Advance indexing, iterating over  Array | Lecture, Discussion,  Hands on | 5 |  |  |
| Joint, Split, Search, Sort and  Filter | Lecture, Discussion,  Hands on | 5 |  |  |
| Stacking and Broadcasting | Lecture, Discussion,  Hands on | 5 |  |  |
|  | Series, DataFrames and Read  Files using pandas | Lecture,  Discussion,Hands on | 5 |  |  |
| Data cleaning, Working with missing data, Boolean Indexing and Universal functions | Lecture, Discussion,Hands on | 5 |  |  |
| Groupby, Working with Text data, Creating Pandas Series, Merging, Joining, Concatenation | Lecture, Discussion,Hands on | 5 |  |  |

Python Analytics

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| Pandas | Working with Date and Time using Pandas, Working with pandas Xlsx Writer | Lecture, Discussion,Hands on | 5 |  |  |
| Selecting Random samples, Duplicate Data, Query method() | Lecture, Discussion,Hands on | 5 |  |  |
| Categories, Vectorization in Python, Statistics and probability concepts for data science | Lecture, Discussion,Hands on | 5 |  |  |
| Sampling and Types of Sampling Techniques, Types of Probability Sampling | Lecture, Discussion,Hands on | 5 |  |  |
| Matplot, Seaborn and Scipy | MATPLOT LIB, Subplots and  Legends | Lecture,  Discussion,Hands on | 5 |  |  |
| Plot Lines, Multiples, Opacity, Bar plots and its types | Lecture, Discussion,Hands on | 5 |  |  |
| Piechart, Seaborn and its styles and Scipy | Lecture, Discussion,Hands on | 5 |  |  |
| **Stage 2 - Revision** | | | **1** |  |  |
| **Formative Assessment - 2** | | | **1** |  |  |