Certificate in Python for Data Analysis

Qualifying Participants

Individuals who have basic science background. It is best suited for those with the capability of leveraging applied science with python and other computing language. Participants should be able to utilize these skill sets to conduct data analysis and generate data visualization reports based on different business scenarios.

Testing Standards

Basic Theory: Statistics, Probability, Data Mining, Computer Algorithm, Data Structure

Tools and Software Requirements: Python and related tool kits, Excel

Prerequisite Skills: Ability to utilize python and similar tools to generate data visualization reports through implementing data control, data processing, data cleaning, analysis and related tasks.

Exam Topics

Knowledge Summary

- Python Basic, iPython, Data Structure, computer algorithms, data Loading, data Wrangling, data visualization, web crawler, time Series Analysis

Approach Summary

- Numpy, Pandas, iPython, Matplotlib, Scikit-learn, Jupyter Notebook

Basic Python

- data type and basic struture
- Map, Filter and Reduce
- list comprehension

Adv Data Structure

- Numpy ndarray
- Numpy Lindar Algebra
- Pandas Series, DataFrame
- Pandas Computing Descriptive Statistics
- Handling Missing Data

Data Loading

- Handle different format of File
- Interacting with HTML & APIs
- Basic Web Crawler

Data Wrangling

- Combining and Merging Data Sets

- Reshaping

- Data Transformation

- String Manipulation

- Data Aggregation and Group Operations

Data Visualization

- Ploting

- Data Story

Analysis

- Time Series

- Basic Economic Data Application

Grading Standards & Process

- This online test consists of 9 coding challenges.

- Test will be marked by examiners, and the results will be available one week after the test.

- The grading is based on a pass or no pass system. A minimum score of 80% is required to pass the test and receive the verified certificate.

Textbook

[Python for Data Analysis](#)