

# DATA SCIENCE WITH PYTHON BASICS (ELITE CLASS) - MODULE 1

"PERSONALISED  
LEARNING"

16-HOUR  
CODING  
CLASS

## DATA SCIENCE & A.I. WITH PYTHON (FULL COURSE)



This module gives you a good grasp of the fundamental concepts of **data science**, basic programming logic with Python and its syntax, and helps you build up your own **financial analysis** with personalised material & methodology within two weeks in a personalised teaching & learning experience.

**Total Course Fee:** HKD64,000 (HKD12,800 per module)

**Total Course Hours:** 80 (16 hours per module)

**Duration:** please refer to the latest schedule on the website of RTP (Registered Public Courses)



### Key Topic Highlights:

#### Python for Data Science

- Grasp **basic Python concepts** and logics for data filtering, etc. Code your **first stock alert programme** and learn simple logic behind it. You will also see how Python is applied in the real-world with **Machine Learning and Artificial Intelligence**.

#### Web Scraping with APIs

- Learn to scrape **historical stock price data** or leverage on existing datasets to access useful information in the data structure.

#### Analyzing Data with Python

- Introduction to **popular libraries and Python package** like NumPy used by professionals to efficiently practice data science and manipulate data to your own ends.

#### Intro to Data Visualization

- **Build a basic data project** and learn how data scientists create meaningful and insightful plots with **data visualization** and evaluate **companies' stock price charts with personal learning material**.



**Who is it for?** **Absolute beginners** in programming who are interested in knowing how to start their first data project with Python to research on within an efficient timeframe intensively.

**66,000 NEW TECHNOLOGY AND DATA  
SCIENCE JOBS WILL BE CREATED BY 2030.**

Source: Financial Times

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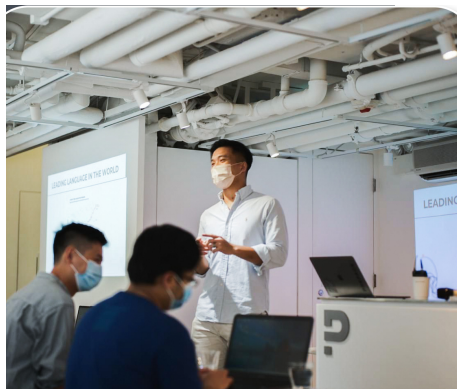
**PREFACE  
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# ADVANCED-DATA ANALYSIS AND DATA ENGINEERING (ELITE CLASS) - MODULE 2

"PERSONALISED  
LEARNING"

16-HOUR  
CODING  
CLASS

## DATA SCIENCE & A.I. WITH PYTHON (FULL COURSE)



Harvest useful data from anywhere online and use **powerful libraries** from Python to streamline your own **research**. After this course, you can easily and quickly understand how to apply different programming techniques to different industries including the business sector(s) you are involved in with personalised material & methodology within two weeks in a personalised teaching & learning experience.

**Total Course Fee:** HKD64,000 (HKD12,800 per module)

**Total Course Hours:** 80 (16 hours per module)

**Duration:** please refer to the latest schedule on the website of RTTP (Registered Public Courses)



### Key Topic Highlights:

#### Data Crawling and Data Mining

- Learn how to extract and save any data on any websites like Google and Yahoo, process the HTML codes, and build automated tools to crawl the web at scale. **From texts to images**, fetch and display desired information for your own use with libraries like BeautifulSoup.

#### Automation with Python

- Based on the programming basics learned, create Python programs that perform useful achievement of **automation** with libraries like Selenium. Things that might take us hours to do, now can be done by computer in minutes.

#### Advanced-Data Visualisation

- Bridge the gap between data and insights and create **informative and striking statistical graphics** with libraries like Seaborn and Plotly. Draw effective conclusions and analysis by visualizing the multidimensional relationships among the data samples.

#### Data Cleaning and Feature Engineering

- Understand the importance of data cleaning and feature engineering in a **machine learning project**. Learn how to explore, clean and model data for supervised machine learning using preprocessing techniques.



**Who is it for?** Data Science & A.I. with Python Module 1 graduates who are interested to leverage Python further to derive value from data to research on various projects within an efficient timeframe intensively.

## ARTIFICIAL INTELLIGENCE IS ONE OF THE MOST IN-DEMAND JOB SKILLS IN 2030.

Source: LinkedIn

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**PREFACE  
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# DATA ENGINEERING AND REGRESSION MODELING (ELITE CLASS) - MODULE 3

"PERSONALISED LEARNING"

16-HOUR CODING CLASS

## DATA SCIENCE & A.I. WITH PYTHON (FULL COURSE)



Understand how to clean and model data for supervised **machine learning**. You will be able to use decision trees like Random Forest to build **classification models** and generalize new data and prevent overfitting in machine learning by experimenting in your own use case within two weeks in a personalised teaching & learning experience.

**Total Course Fee:** HKD64,000 (HKD12,800 per module)

**Total Course Hours:** 80 (16 hours per module)

**Duration:** please refer to the latest schedule on the website of RTPP (Registered Public Courses)



### Key Topic Highlights:

#### Data Cleaning and Supervised Learning

- Learn how to explore, clean and model data for supervised machine learning using preprocessing techniques. Implement linear and logistic regression, and **build classification models** with Random Forest to make predictions with Python machine learning library.

#### Unsupervised Learning

- Learn how to find associations, patterns, and relationships present in data using clustering techniques and dimensionality reduction techniques as well as matrix factorization to **break data set** in groups.

#### Generalization and Overfitting

- Determine whether a model is good or not by implementing both a training set and a test set to ensure its ability to adapt and **generalized to new, unseen data**. Learn how the reward-punishment mechanism works to penalized models to **prevent overfitting** using regularization and cross-validation methods to improve model accuracy in your own use cases.



**Who is it for?** Data Science & A.I. with Python Module 2 graduates who are interested to leverage Python further to derive value from data to research on various projects within an efficient timeframe intensively.

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Source: LinkedIn

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# DEEP LEARNING AND NEURAL NETWORKS (ELITE CLASS) - MODULE 4

"PERSONALISED  
LEARNING"

16-HOUR  
CODING  
CLASS

## DATA SCIENCE & A.I. WITH PYTHON (FULL COURSE)



Build your **deep learning model** with Google's Tensorflow and Keras Library. This module allows you to understand the architecture and key parameters in a **neural network** and apply different forms of machine learning algorithms in your own use case within two weeks in a personalised teaching and learning experience in a small class environment.

**Total Course Fee:** HKD64,000 (HKD12,800 per module)

**Total Course Hours:** 80 (16 hours per module)

**Duration:** please refer to the latest schedule on the website of RTPP (Registered Public Courses)



### Key Topic Highlights:

#### NLP and Image Classification

- Learn how to extract and identify information from unstructured text using text mining and **Natural Language processing (NLP)** techniques to make sense out of data, e.g. how Siri is powered. Know how to **pre-process raw image** data using normalisation and standardisation techniques.

#### Deep Learning with Keras

- Hands-on with popular machine learning tools like Google's Tensorflow; and leverage on the Keras Library to build, train and test your first **deep learning model with your own use case**.

#### Neural Networks

- Understand the architecture and key parameters in a **neural network** and apply different forms of machine learning algorithm like Recurrent Neural Networks (RNNs) for sequential data such as time series and financial data; Natural Language Processing (NLP) text classification and generation and Convolutional Neural Networks (CNN) for **image classification**.



**Who is it for?** Data Science & A.I. with Python Module 3 graduates who are interested to leverage Python further to derive value from data to research on various projects within an efficient timeframe intensively.

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Source: LinkedIn

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# DEPLOYMENT OF MACHINE LEARNING (ELITE CLASS) - MODULE 5

"PERSONALISED  
LEARNING"

16-HOUR  
CODING  
CLASS

## DATA SCIENCE & A.I. WITH PYTHON (FULL COURSE)



In the final module, deploy machine learning and build your **own model** with your own use case for demonstration of the techniques absorbed. Implement machine learning techniques to make predictions, deliver insights and communicate findings in real practice within two weeks in a personalised teaching and learning experience in a small class environment.

**Total Course Fee:** HKD64,000 (HKD12,800 per module)

**Total Course Hours:** 80 (16 hours per module)

**Duration:** please refer to the latest schedule on the website of RTP (Registered Public Courses)



### Key Topic Highlights:

#### Deployment of Machine Learning

- In this final module, you'll have equipped yourself with skills to comb over available data and be able to implement **practical machine learning techniques** to make predictions as well as deliver insights as well as communicate findings using data visualisation techniques.

#### Final Project

- Equipped with all skills learnt from previous modules, including data analysis, data engineering and regression modeling, and image classification etc., you will be able to deploy machine learning on a project with your own use case.
- Now it's your time to build, train and deploy **your own model** at scale step by step and change the world!



**Who is it for?** Data Science & A.I. with Python Module 4 graduates who are interested to leverage Python further to derive value from data to research on various projects within an efficient timeframe intensively.

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Source: LinkedIn

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