



Data Analytics with Python

Training Programme
by
Faculty of Engineering
Multimedia University

6 November 2020
4 December 2020
Faculty of Engineering

Overview

In the age of IR 4.0, the ease and speed of data acquisition have presented modern scientists and engineers with a unique challenge. What do we do with all that data? More importantly, how can we deduce meaningful information from data that will benefit our business/project/research? Enter data analytics. This course will expose participants to essential statistical methods that will enable them to conduct basic data analysis. Through graphical and non-graphical means, participants will learn how to identify patterns in data, summarize data characteristics, and perform inferencing and hypothesis testing. The execution is made all the more convenient with specialized Python libraries. Data analysis, when done right, can potentially yield crucial insight for strategic decision-making and action.

Objective

At the end of the session, participants will be able to:

1. Identify various statistical methods for exploring and analyzing data.
2. Implement basic data analysis using Python.
3. Interpret the results obtained from data analysis.

Target Audience

This course is open to anyone who would like to learn the basics of how to gain insight from data. Participants will be exposed to essential statistical methods for data analysis and how their implementation may be automated using Python.

Prerequisite

Basic knowledge of Python programming.

Training Methodology

Interactive lecture, demonstrations and hands-on exercises.

Course Duration

1 day.

Content/Outline

Session 1: Data Analytics Overview

- What is Data Analytics
- Data Analytics Lifecycle
- Report and story telling

Session 2: Simple Data Analysis and Summarizing Data

- Measure of location: Average, median, mode
- Measure of spread: Range, interquartile range, variance and standard deviation
- Grouping and Visualisation: Histogram, bar, pie, line, scatter plot, box plot

Session 3: Exploratory Data Analysis (EDA)

- What is EDA
- Graphical Techniques
- Association of two variables (Correlations)
- Quantitative Techniques: Interval Estimation and Hypothesis Tests

Session 4: Mini Project – Hands On

Course Instructors

Mr. Gan Ming Tao

Gan Ming Tao obtained his postgraduate engineering degree from Multimedia University, Malaysia, specializing in fuzzy system identification and statistical modelling. He now lectures full-time at his alma mater. His research interests are in regression analysis, Markovian modelling and operations research techniques. Currently, he is focused on developing mathematical models to describe and solve problems/challenges in multi-point conferencing, smart-grid fraud detection and network load-balancing.

Dr. Tan Wooi Nee

Tan Wooi-Nee received a B.Sc. Comp. & Ed.(Hons), M.Sc in Mathematics and a Ph.D. degree in Mathematics from the Technology University of Malaysia. Her research interests include mathematical modelling of dynamical systems, optimization in applied engineering problems and image processing. She is currently attached with the Faculty of Engineering in Multimedia University as a lecturer. She has had experiences in developing the optimization model related to smart grid, demand side management and telecommunication network.

Administrative Details

Programme Logistics

Duration: 1 day only

Date: 6 November 2020 and 4 December 2020

Venue: MMU Computing Lab

Registration Deadline: 23 Oct 2020 and 20 Nov 2020

Your Investment

Condition		Price per Pax
Regular Fee (After 2 Oct, 30 Oct)	Students / MMU Alumni	RM350
	Public	RM600
	Public (Group >5 pax)	RM500
Early Bird Fee (Before 2 Oct, 30 Oct)	Students / MMU Alumni	RM250
	Public	RM500
	Public (Group >5 pax)	N/A

Method of Payment

Please make payment via bank transfer only. Account details is as below:

Account name: Unitele Multimedia Sdn Bhd

Account number: 86-0090180-2

Bank: CIMB Islamic Bank Berhad

Payment must be made by the registration deadline.

Refund and Cancellation

Any refunds will be processed in 60 days. Should there be any cancellation, it may be due to the organizer not getting the minimum participants or the participant failing to attend the workshop due to unavoidable reason.

Disclaimer

Faculty of Engineering, Multimedia University reserves the right to change the instructors, date and to vary/cancel the programme should unavoidable circumstances arise. All effort will be taken to inform participants of the changes. Upon submission of the registration form, you are deemed to have read and accepted the terms.

Enquiries

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Registration Form

To register, please visit this link: <https://forms.gle/qAAmw5mXHuRLm1376>