

## CERTIFICATE IN DATA ANALYTICS



The availability of data has exceeded the capacity of most managers and executives to analyze and interpret effectively. Since data collection continues to accelerate, the potential for its use is becoming even more evident and threatens the ability of managers to do their jobs efficiently as more competitors learn about analytics. The need for management to master data analytics is apparent.

### Certificate in Data Analytics Modules (offered online)

1. Exploratory Data Analysis and Data Visualization
2. Data Cleaning and Manipulation
3. Supervised and Unsupervised Machine Learning

### Certificate Fees

The registration fee will be \$1,500+HST and group registrations of 2 or more people will be offered at \$1,350+HST per participant. The fee includes all 3 modules and course materials.

### Who Should Apply

Managers, data analysts, and others who need to keep abreast of the latest methods for enhancing return on investment.

“ **Most Industries are Nowhere Close to Realizing the Potential of Analytics** ”

- Harvard Business Review

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Register & learn more at: [uoft.me/IMix-data-analytics](http://uoft.me/IMix-data-analytics)



## Instructor

Gerhard Trippen, Ph.D., M.Sc. is an Associate Professor, Teaching Stream in Quantitative Methods and Operations in the Department of Management at the University of Toronto Mississauga (UTM), with a cross-appointment to the Operations Management and Statistics area at the Rotman School of Management.

Most recent courses taught include Big Data Analytics for the Master of Management Analytics (MMA) program at the Rotman School of Management as well as Big Data and Marketing Analytics in the undergraduate programs at Rotman and UTM.

The Certificate in Data Analytics will educate managers and executives with the methods and techniques of data analytics, the problems inherent in big data analysis, and the potential of using software that learns or improves its analytical approach with minimal or no assistance.

Online Modules	Learning Outcomes
Exploratory Data Analysis and Data Visualization Sept 11: 9 am - 12 pm Sept 18: 9 am - 12 pm	Investigate the variables, examine common applications involving the distributions of categorical variables and histograms of the numeric variables, and exploration of the relationships among sets of variables.
Data Cleaning and Manipulation Sept 25: 9 am - 12 pm Oct 2: 9 am - 12 pm	How do we clean raw data, filter out fields that are obsolete or redundant, deal with missing data & outliers, and perform transformation on certain variables to make projections more accurate?
Supervised and Unsupervised Machine Learning Oct 9: 9 am - 12 pm Oct 16: 9 am - 12 pm	Discuss step-by-step, hands-on applications using Python with a free software machine learning library (Scikit-learn) for real-world business problems using widely available data mining techniques in the area of supervised and unsupervised learning applied to real-world data sets.

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