Course Title	Digital Marketing Analytics (Data, Automation, AI and Analytics)
Duration	7 Days
Trainer	Assoc. Prof. Dr. Rayner Alfred
Cost	Email ralfred121@gmail.com or call 013-881-9966 for quotations
Max Participants	25

SYNOPSIS

New digital technologies have fundamentally reshaped marketing theory and practice over the last decade and have led to a drastic shift in the quality and quantity of information we are able to store, access, and analyze. With this proliferation of data has come an increasing need for many businesses to better understand and react to various consumer patterns, as well as evolve the way they measure, plan, and implement their marketing activity. As such, there's been a growing demand for skilled marketing analysts who are equipped to ensure optimal return on investment (ROI) for marketing spend and to deliver valuable insights that drive better customer service.

Marketing analytics is a field that should transcend the functional boundaries within the profession of marketing and, as such, would be of value and interest to almost anyone working within, or wanting to work within, a marketing-related role. This digital marketing analytics program is designed for participants that would benefit from an increased ability to measure, analyze, optimize, and increase digital marketing ROI.

LEARNING OUTCOMES

This program provides participants with an overview of the best approaches and practices in digital marketing measurements and analysis and offers an understanding of how these tools can be integrated to inform strategic direction. Participants will gain

- hands-on experience in the application of analytics tools and techniques, to real-world marketing problems.
- learn to create a predictive model using analytics tools and be equipped to recommend ROI optimization strategies from data collected through attribution modelling and A/B and multivariate experimentation.

- learn how analytics-based marketing is used to improve ROI for marketing campaigns and will navigate the latest applications of artificial intelligence (AI), machine learning, and predictive modelling within the context of marketing analytics.

JUSTIFICATION TO LEARN DIGITAL MARKETING ANALYTICS

New digital technologies have fundamentally reshaped marketing theory and practice over the last decade and have led to a drastic shift in the quality and quantity of information we are able to store, access, and analyze. With this proliferation of data has come an increasing need for many businesses to better understand and react to various consumer patterns, as well as evolve the way they measure, plan, and implement their marketing activity. As such, there's been a growing demand for skilled marketing analysts who are equipped to ensure optimal return on investment (ROI) for marketing spend and to deliver valuable insights that drive better customer service.

TOPICS LIST

[1] UNDERSTANDING THE DIGITAL MARKETING CHANNEL MIX
[2] IMPLEMENTING INTEGRATED DIGITAL MARKETING
[3] UNDERSTANDING PREDICTIVE ANALYTICS AND PREDICTIVE MODELING
[4] IMPLEMENTING PREDICTIVE ANALYTICS ACROSS CHANNELS
[5] OPTIMIZING RETURN ON INVESTMENT (ROI)
[6] THE FUTURE OF INTEGRATED DIGITAL MARKETING: VIDEO, MOBILE AND AI
[7] CREATE A DIGITAL MARKETING OPTIMIZATION PLAN

COURSE SYLLABUS (7 DAYS)

DAY	TOPICS COVERED	TIME
One	**MODULE 1: UNDERSTANDING THE DIGITAL MARKETING CHANNEL MIX** ➢ In this module, you'll gain insight into the integrated nature of digital marketing and the various digital channels that can be leveraged to optimize marketing spend. ➢ You'll have the opportunity to focus on the channels of search, display, mobile, and social marketing, and examine how these channels can work together. ➢ In doing so, you'll begin to recognize the significance of the integrated, multi-channel experience.	8am – 5pm
Two	**MODULE 2: IMPLEMENTING INTEGRATED DIGITAL MARKETING** ➢ This module aims to give you experience and insight into certain available digital marketing analytics tools and teach you how to use these tools to interpret campaign performance. ➢ Digital marketing analytics tools such as Google Adwords, Facebook Ads, and web analytics tools such as Google Analytics will be explored. ➢ You'll practically apply these tools with the data sets provided to you and use them to analyse and measure marketing performance.	8am – 5pm

Three	**MODULE 3: UNDERSTANDING PREDICTIVE ANALYTICS AND PREDICTIVE MODELING** ➢ In this module, you'll come to understand more about how predictive analytics is used in digital marketing and why it forms such an integral part of marketing strategy. ➢ You'll learn how predictive analytics use data and statistical algorithms to identify the likelihood of future outcomes based on historical data. ➢ You'll then go beyond knowledge of what has happened in the past and learn how to provide an assessment of what will happen in the future - an essential step in improving marketing campaigns.	8am – 5pm	
Four	**MODULE 4: IMPLEMENTING PREDICTIVE ANALYTICS ACROSS CHANNELS** ➢ This module aims to equip you with an understanding of what is involved in creating a predictive model before implementing predictive analytics techniques across digital marketing channels. ➢ You'll learn how to create a predictive model, which involves techniques such as regression analysis, basic descriptive statistics (mean, min/max, standard deviation), using software such as R. ➢ You'll implement these predictive analytics techniques across digital marketing channels using a real-world case study and create a predictive model on this basis.	8am – 5pm	
Five	**MODULE 5: OPTIMIZING RETURN ON INVESTMENT (ROI)** ➢ In this module, you'll work with marketing campaign data across multiple channels and learn to optimize certain marketing strategies for optimal performance and ROI. ➢ You'll become familiar with the factors influencing return on investment and consider where to adjust your marketing spend. ➢ Finally, you'll learn to measure ROI, deduce the efficiency of a given marketing campaign in obtaining optimal ROI, and then recommend ROI optimization strategies for this same campaign.	8am – 5pm	
Six	**MODULE 6: THE FUTURE OF INTEGRATED DIGITAL MARKETING: VIDEO, MOBILE AND AI** ➢ This final module offers you an introduction to the exciting future of digital marketing. ➢ You'll explore the possibilities offered by video and mobile marketing, as well as the applications of artificial intelligence in these and other contexts. ➢ Finally, using data and research from previous modules, you'll create a holistic digital marketing plan for your ongoing project, aimed at optimizing a given marketing campaign.	8am – 5pm	

Eight	**MODULE 7: CREATE A DIGITAL MARKETING OPTIMIZATION PLAN** ➢ By the end of this program, you'll be equipped to create a digital marketing optimization plan for your marketing portfolio using a real-world case study with corresponding data sets. ➢ The ongoing project helps you engage with key ideas related to optimizing a digital marketing strategy. These include developing a predictive model using predictive analytics tools, recommending ROI optimization strategies, and finally creating a 6-10-page report that pieces everything together and draws on data-driven evidence to support your overall strategy.	8am – 5pm	

TRAINER'S BIOGRAPHIES

RAYNER ALFRED

ASSOCIATE PROFESSOR OF COMPUTER SCIENCE

Certified IBM DB2 Academic Associate, Certified Tester Foundation Level (CTFL)

AREAS OF SPECILIZATION: Advanced Machine Intelligence, Data Analytics, Data Mining, Information Retrieval, Artificial Intelligence, Machine Learning, Knowledge Discovery

ADDRESS: Knowledge Technology Research Group, Faculty of Computing and Informatics, Universiti Malaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah.

CONTACT: Mobile: 6013-881-9966, eMail: ralfred@ums.edu.my

Rayner Alfred is an Associate Professor of Computer Science at the Faculty of Computing and Informatics, Universiti Malaysia Sabah in Malaysia that focuses on Data Science and Software Engineering programmes. He leads and defines projects around knowledge discovery, information retrieval and machine learning that focuses on building smarter mechanism that enables knowledge discovery in structured and unstructured data. His work addresses the challenges related to big data problem: How can we create and apply smarter collaborative knowledge discovery and machine learning technologies that bridge the structured and unstructured data mining and cope with the big data problem.

Rayner completed his PhD in 2008 looking at intelligent techniques using machine learning to model and optimize the dynamic and distributed processes of knowledge discovery for structured and unstructured data. He holds a PhD degree in Computer Science from York University (United Kingdom), a master's degree in computer science from Western Michigan University, Kalamazoo (USA) and a Computer Science degree from Polytechnic University of Brooklyn, New York (USA) where he was the recipient of the *Myron M. Rosenthal Academic Achievement Award* for the outstanding academic achievement in Computer Science in 1994. He has authored and co-authored more than 100 journals/book chapters and conference papers, editorials, and served on the program and organizing committees of numerous national and international conferences and workshops.

Rayner is currently a member of IEEE, a Certified Software Tester (CTFL) from the International Software Testing Qualifications Board (*ISTQB*), and a certified IBM DB2 Academic Associate (IBM DB2 AA). He leads the Advanced Machine Intelligence (AMI) research group in UMS and he has led several projects related to knowledge discovery and machine learning on Big Data. Rayner is also the recipient of the Research Fellow at Japan Advanced Institute of Science and Technology (JAIST), Japan. He is also the recipient of multiple GOLD awards at national and international research exhibitions in Data Mining and Machine Learning based solutions (Face Recognition and Knowledge Discovery), that

include International Trade Fair Ideas in Nuremberg, Germany (iNEA2018) International Invention Innovation Competition in Toronto, Canada (iCAN 2018), Seoul International Invention Exhibition in Seoul, Korea (SIIF 2010). He has secured RM6,931.433.00 worth of project grants. Some of his project researches include biometric authentication using face recognition, building security based on plate number recognition using deep learning, sentiment analysis for Malay and English in measuring public opinion, news-news correlation trending, machine learning algorithm-based solution for predicting diseases in health care, smart monitoring using an ensemble based face recognition system and smart information management and retrieval to name a few. Some of the completed projects include Semantic Multi-Agent For Knowledge Sharing, developing an Evolutionary-Based Ensemble Classifier Framework for Learning Big Relational Data, developing a genetic-based hierarchical agglomerative clustering technique for parallel clustering of bilingual corpora based on reduced terms, enhancing document Clustering By Integrating Semantic Background Knowledge and Syntactic Features Into the BOW Representation and the fundamental Study on an Evolutionary Based Features Construction Methods for Data Summarization Approach to Predict Survival Factors of Coral Reefs in Malaysia, to name a few and also infrared face recognition based on ensemble approach.