MASTER OF DATA SCIENCE

BUILDING HIGH-DEMAND SKILLS AND NEW CAPABILITIES FOR IR 4.0

QS STARS™ RATING SYSTEM

Premier Digital Tech Institution™

AACSB Business Education Alliance

HELP University
university of achievers

OUR MISSION

To help people succeed in life and to live a life of significance through education

OUR VISION

- To be a university with a strong culture of quality and leadership that focuses on sound academic standards, continuous improvements, and the talent development of students and staff
- To be a university that offers a learning experience that enhances career development, lifetime values and personal fulfilment
- To be a university with a strong research focus in our key areas of excellence
- To be a university that shares our success with the stakeholders and communities we serve

OUR VALUES

- Pride of Achievement
- Sharing Success
- The Courage to Be
- To be Compassionate
- To be Significant

MASTER OF DATA SCIENCE

KPT/JPS (N/841/7/0817) (MQA/PA 13820) 07/25

AIMS

The programme aims to produce graduates to meet the growing demand for data science professionals who are capable of making decisions based on the availability of comprehensive data. It prepares graduates to apply analytics techniques for knowledge discovery and dissemination to assist researchers or decision-makers in achieving organisational objectives.

OBJECTIVES

The objectives of the Master of Data Science are to produce graduates who are able to:

- Apply quantitative modelling and data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualisation techniques
- Recognise and analyse ethical issues in business related to intellectual property, data security, integrity, and privacy
- Demonstrate knowledge of statistical data analysis techniques utilised in decision-making.
- Use data mining software to solve real-world problems
- Employ cutting edge tools and technologies to analyse Big Data
- Apply algorithms to build machine intelligence.
- Demonstrate use of team work, leadership skills and decision making.

MODULES

PROGRAMMING FOR DATA SCIENCE
Equips students with fundamentals of programming using a high-level programming language to solve problems focusing on data.

DATA MANAGEMENT
Introduces techniques related to modelling, extraction, cleansing, profiling, integration and access of data.

STATISTICS FOR DATA SCIENCE
Provides an introduction to basic statistical concepts and methods which include: simple and multiple linear regression, classification, decisions trees, support vector machines, and unsupervised learning.

RESEARCH METHODS
Instructs students in the various processes related to conducting research, including writing the research proposal, research design, collecting, processing and analysing data, and writing the research report.

APPLIED MACHINE LEARNING
Provides a foundation for principles of machine learning by exploring major approaches and algorithms, feature engineering and model evaluation methods.

DISSERTATION
A research project based on industry requirements. The students may work on the project on-site, or they may work on the project at the university. The students will gain real-world exposure to modern data science challenges. Projects will be drawn from real-world problems and may be conducted with government, industry or academic partners.

ENTRY REQUIREMENTS

Any one of the following:

- A Bachelor's degree or its equivalent, with a minimum CGPA of 2.75; OR
- A Bachelor's degree or its equivalent, with a minimum CGPA of 2.50 and not meeting CGPA of 2.75, can be accepted subject to a rigorous internal assessment process; OR
- A Bachelor's degree or its equivalent, with CGPA between 2.00 and 2.50, with a minimum of 5 years' working experience in a relevant field may be accepted subject to a rigorous internal assessment process.

For candidates without a Computing degree, prerequisite module(s) should be taken to adequately prepare them for their advanced study.

International applicants will also be required to fulfil one of the following English language competencies:

- IELTS: 5.0 OR
- TOEFL: 500 OR
- Equivalent qualification

Prerequisite Module(s)

Candidates who do not have a computing degree should take the prerequisite module(s) to adequately prepare them for their studies. However, they may apply for exemption from the module(s) if they have done similar module(s) in their Bachelor's degree studies.

CAREER PROSPECTS

After completion of this programme, students may pursue the following careers:

- Machine Learning Scientist
- Decision Analytics Manager
- Data Analytics Manager
- Data Scientist
- Data Innovation Manager
- Business Analyst Manager
- Business Intelligence Developer
- Data Architect
- Data Analyst
- Statistician
- Data Mining or Big Data Engineer.

PROGRAMME DURATION

6 academic modules to be completed in a minimum period of 1 year.

INTAKES

January and June

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