“My team leverages data analytics solutions to enhance the customer experience and facilitate partner growth. This contributes to NTUC’s digital transformation.” - Dr Zhao Jingyuan, Director, NTUC Link Analytics Centre – Ph.D. in Statistics (2008)

“I utilise advanced analytics and machine learning to analyse healthcare datasets, which transform our understanding of patient treatments and healthcare outcomes. This enables us to deliver the right drugs to patients at the right price.” - Ivan John Clement, Consultant Data Scientist, IQVIA – B.Sc. (Hons) in Computational Biology (2013); M.Sc. in Management of Health Industries (2015), ESSEC Business School

“Through data analytics, we provide reliable weather forecasts that ensure the safety of our clients’ offshore marine operations anywhere around the world.” - Arnold Doray, Chief Executive Officer, Terra Weather – B.Sc. in Physics (1994); Master of Technology in Knowledge Engineering (2002)

“I provide statistical analysis and valuation advice to create business value and improve the performance of clients’ actuarial portfolios.” - Liu Jiang, Senior Actuarial Consultant, Dettee Southeast Asia – B.Sc. in Actuarial Mathematics and Statistics (2011); M.Sc. in Quantitative Finance (2014), Singapore Management University


“Students have the flexibility to pursue their area of interest in data science, while gaining a strong foundation in core areas such as statistics and computing.” - Vithresh S/O Jaya Kumar

“The course taught me how to crunch data to obtain valuable insights, visualise data and communicate my findings to non-specialist audiences.” - Khairiyah Bte Mohamed Ridhwan

More Information
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Preparation Future Leaders in Data Science and Analytics

The nature of data has changed dramatically. Between the dawn of civilisation and 2003, the human race created five exabytes (5 x 10^18) bytes of information. Now we are producing that amount every two days. Such a huge amount of data, collectively called Big Data, creates an urgent need to make sense of it.

Data science is an emerging field that involves computational principles, methods and systems for extracting and structuring knowledge from data. On a daily basis, large datasets are generated by activities in the sciences, society and commerce. Data scientists are constantly seeking patterns and analytics in the sciences, society and commerce.

Data science is an emerging field that involves computational principles, methods and systems for extracting and structuring knowledge from data. On a daily basis, large datasets are generated by activities in the sciences, society and commerce. Data scientists are constantly seeking patterns and predicting outcomes from these vast collections of data.

The Data Science and Analytics programme offered by the Department of Mathematics and the Department of Statistics and Applied Probability in the Faculty of Science, in conjunction with the Department of Computer Science in the School of Computing, is the first in Singapore.

This four-year direct Honours programme is designed with sufficient technical depth to equip graduates with the ability to develop novel analytical tools for new scientific applications and industry problems that will emerge in future.

- Multidisciplinary curriculum
- Key facets is the interdisciplinary nature of the programme. You will read modules in Mathematics, Statistics and Computer Science, and be exposed to the interplay among these three key areas in the practice of data science.
- Three key areas will equip you with deep exposure to Artificial Intelligence, computation and optimisation, computer algorithms, database and data processing, data mining and machine learning and high-dimensional statistics.
- Experiential learning. You will undertake a community placement in industry or research, where you will have the opportunity to work on current research and projects that are related to real-life data and workplace challenges.
- Global exposure. You can participate in a range of programmes: study abroad and student exchange programmes at over 300 partner universities. This opens the door to a global learning experience, grooming you to be more productive and more competitive, thereby powering economic growth.

Admission Requirements

Applicants should have a very good pass in either H2 Mathematics or H2 Further Mathematics, and a good pass in H2 Biology or H2 Chemistry or H2 Physics or H2 Computing.

Varied Career Prospects

Critical emerging technology specialist roles include data scientists and Artificial Intelligence/Machine Learning engineers. As at June 2018, 16,400 professionals were employed in such roles and an additional 1,800 roles remained vacant. Enterprises project the demand to grow by another 9,300 in the next three years (2019 – 2021).

Graduates of this programme will have career opportunities as data science professionals in the public sector which includes Smart Nation work, as well as in diverse industries where there is growing need for extensive data collection, processing and analyses. These include biomedical sciences, clean technology, consumer businesses, data science and analytics, e-commerce, finance, healthcare, infocommunications, manufacturing, marketing, re/insurance, safety and security, technology, telecommunications, transportation etc.

In the third and fourth years of study, you will gain in-depth exposure to Artificial Intelligence, computation and optimisation, computer algorithms, database and data processing, data mining and machine learning and high-dimensional statistics.

First Data Science and Analytics Degree Programme in Singapore

- You will gain in-depth exposure to Artificial Intelligence, computation and optimisation, computer algorithms, database and data processing, data mining and machine learning and high-dimensional statistics.
- Your studies will equip you with the skills, knowledge and expertise that enhance your employability after graduation.
- You will read modules in Mathematics, Statistics and Computer Science, and be exposed to the interplay among these three key areas in the practice of data science.
- Three key areas: data science, statistics and computer science.
- You will undertake a community placement in industry or research, where you will have the opportunity to work on current research and projects that are related to real-life data and workplace challenges.
- You can participate in a range of programmes: study abroad and student exchange programmes at over 300 partner universities. This opens the door to a global learning experience, grooming you to be more productive and more competitive, thereby powering economic growth.