#### STUDENT LIFE

The Department provides student exchange and internship opportunities to our students to gain international perspectives, global engagement and industry experience.

Student may choose between the overseas student exchange opportunities at world-leading institutions provided by the Department or the University. Paying the tuition at CityUHK, students will spend a study semester abroad and may transfer the academic credits earned at the host institution to fulfil the graduation requirement.

The Department also partners with premier corporates in a to 100 companies.

# wide range of sectors to offer DS-privileged internship opportunities to our students. With these placements, students are expected to gain practical knowledge and hands-on experience in real-world applications. To date, the Department has set up internship arrangements with close



### IN-DEMAND DATA SCIENCE CAREERS





**Financial** Quantitative



Data Analyst

Analyst



Machine Learning Engineer



Data

Engineer







Database



Analyst



**Cloud Specialist** 

Developer

Al Engineer



Dr. Lucas HUI Chief Technology Officer, ASTRI

CityUHK data science programmes have consistently offered us wonderful talents with both technical and soft skills to help inject data into our team's DNA.

Mr. Chester YUE

Regional Head of Internal Audit, Reinsurance Group of America



# Data Science

at City University of Hong Kong





# **DEPARTMENT OF DATA SCIENCE**

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City University of Hong Kong offers two unique undergraduate programmes aimed at nurturing and developing students to become data science professionals who are able to discover applicable knowledge to support social and economic development in Hong Kong and beyond.

## WHAT IS DATA SCIENCE?

Data science is an interdisciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from data. It employs techniques and theories within the context of mathematics, statistics, and computer science. It can add value to businesses by utilizing their data. Data science aims to help solve many important problems ranging from smart city to management and finance.

#### WHY STUDY DATA SCIENCE?

Recently, businesses and industries powered by data science experience a sharp growth. Various companies and organizations in Hong Kong and beyond are developing their own data analytics units. Numerous start-ups and incubation firms focus their energy on data science. Data science has become one of the most popular and promising careers nowadays.

Data science is the most valuable subject in modern business such as logistics, e-commerce, advertising, medicine, etc., just as oil in traditional industry.

Mr. Zhuoluo YANG
Director of SF Express Big Data Platform Research Center

# **DEPARTMENT OF DATA SCIENCE** (JS1071)

(Options: BSc Data Science, BSc Data and Systems Engineering)

Data Science focuses on solving problems and advancing societies using vast amounts of data. Students of JS1071 will have a free choice of majors (BSc Data Science or BSc Data and Systems Engineering) after one year of study.

## WHY US?



Most International Universities in the World 2024
[THE]



Ranked 62<sup>nd</sup> in the world [QS World University Rankings 2025]



Ranked 4th among the world's top universities founded in the last 50 years

[QS Top 50 under 50 in 2021]

We are delighted to collaborate with CityUHK to nurture talented data scientists to advance the smart city development in Hong Kong.

Mr. Jerry LI CEO of Lenovo PCCW Solutions

## CURRICULUM

#### Data Science Project

Apply your knowledge and showcase your data science capabilities

#### Major Elective Courses

Freedom to follow your own path and interests

You may make use of the free electives to gain domain knowledge in specific areas or even enrich your studies with a minor

Bachelor of Science Data Science (JS1072)	Bachelor of Science Data and Systems Engineering (JS1074)
Specialization Modules  Become an expert in  Statistical Learning Artificial Intelligence (AI) Social Media Analytics	Specialization Courses  Become an expert in  · FinTech  · Industrial AI  · Smart City  · Internet of Things (IoT)
Advanced Courses	Advanced Courses  Decision Analytics and Risk Management Quality Technologies Operations Research Financial Engineering and Analytics Reliability Engineering Engineering

#### **Data Science Courses**

Fundamental courses to start your study in data science

Data Mining Data Visualization Python for Data Science

Convex Optimization Artificial Intelligence Introduction to Data Science

Statistical Methods and Data Analysis Fundamentals of Machine Learning

#### **Gateway Education Courses**

Required courses to build up the foundation

Calculus Linear Algebra Database Systems
English and Chinese Computer Programming Probability and Statistics

This figure shows the basic structure of our two programmes. It is subject to change.

# Bachelor of Science Data Science (JS1072)

#### Data Science DEEP

The programme provides essential trainings like quantitative knowledge, statistics, data mining technology and computing tools for emerging real-world applications.

In an inter-professional setting, students are given the tools to build theoretical and methodological knowledge in data science, communication skills and ethic awareness. There are three flexible modules of advanced knowledge:

- · Artificial Intelligence (AI)
- Social Media Analytics
- Statistical Learning

# Bachelor of Science Data and Systems Engineering (JS1074)

#### Data Science PLUS

The programme offers solid foundation in data science and intelligent systems, where students will learn to analyse, manage and improve enterprise-class systems using big data. Graduates will be equipped with necessary tools and skills to solve emerging real-world application problems and become big data professionals in the following fields:

- FinTech
- · Industrial AI
- Internet of Things (IoT)
- Smart City