MD™
Premier Digital Tech Institution

HELP University
university of achievers
DU028(W)

INFORMATION & COMMUNICATION TECHNOLOGY

- DIPLOMA IN INFORMATION TECHNOLOGY
- BACHELOR OF INFORMATION TECHNOLOGY (HONS)
- BACHELOR OF INFORMATION TECHNOLOGY (HONS) (WORK-BASED LEARNING)
- BACHELOR OF INFORMATION TECHNOLOGY (HONS) DATA ANALYTICS
- BACHELOR OF COMPUTER SCIENCE (HONS)
- MASTER OF DATA SCIENCE

MARCH 2024 EDITION

HELP University
university of achievers
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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

DEVELOPING EXCELLENT ENTREPRENEURIAL PROFESSIONALS IN INFORMATION TECHNOLOGY

MAJ PROF DR R LOGESWARAN A/L N RAJASVARAN
Dean, Faculty of Computing and Digital Technology

Information Technology (IT) is vital to almost every business and field, as a growth catalyst and to sustain even daily operational functionality in this modern era. The Faculty of Computing and Digital Technology @ HELP University produces young professionals who are apt in the various hot areas of IT, by catering teaching & learning curriculum and activities to enable graduates to succeed in employment and as technopreneurs. Graduates are trained to be critical, project-oriented thinkers who are able to work well collaboratively as well as succeed independently.

Through our robust links with industry partners, networks, and academic connections, we provide real-world industry strength exposure to students from the beginning of their studies. This allows them to conceptualize and work through a portfolio via various courses to culminate in effective final year projects. Incorporated is an internship programme that equips our students with not only valuable work experience, but the essential work skills needed to thrive and succeed in an increasingly competitive global market.

Students get to hone their expertise in a wide range of hot topics including artificial intelligence (AI), cyber security, data analytics, mobile application development, Internet of Things (IoT), Fintech, quantum computing and many others. We have secured partnerships with various industries to provide the latest in the various fields, including via appointment of Dato' Ts. Dr. Haji Amirudin bin Abdul Wahab, CEO of Cybersecurity Malaysia to the Professorial Chair of Cybersecurity at the Faculty.

Recognised for excellence as a digital tech educator via the MDEC's Premier Digital Tech Institution (PDTI) Award, our dedicated team of academicians and support staff endeavour to instill values of leadership, service, lifelong learning, and self-improvement, whilst providing a high level of pastoral care to ensure students' success. Our mission has always been to produce graduates who are motivated for excellence and achievement; graduates who are at home in the current & future VUCA (Volatility, Uncertainty, Complexity, Ambiguity) world - a world where change is the only constant.

We welcome all our prospective students to the Faculty and wish you a fulfilling educational journey with us in - DEVELOPING EXCELLENT ENTREPEURIAL IT PROFESSIONALS!

WHAT IS INFORMATION & COMMUNICATION TECHNOLOGY?

Information & Communication Technology (ICT) is the convergence of Information Technology, Telecommunications and Data Networking into a single technology. It is defined as the diverse set of technological tools and resources used to transmit, store, create, share or exchange information, and covers a multitude of different jobs in most fields in the modern world, ranging from working on data entry, to optimizing the internet and even to setting up systems for guiding rockets. Graduates with the right skills and experience are in high demand in a wide range of industries. Jobs in these areas are increasingly in demand, especially with the rising business need for data analytics, cyber security, IoT, smart systems and automation. The long-term global outlook is very positive for jobs in this field.

10 THINGS YOU SHOULD KNOW ABOUT ICT @ HELP

GREAT CAREER PROSPECTS

>99%

EMPLOYABILITY

Our graduates have been employed by IBM, Intel, HP, Accenture, Shell, CIMB, CitiBank , ASTRO, Star, Maxis, etc.

WORK-BASED LEARNING

EARN while you **LEARN**

FUTURE-PROOF GRADUATES READY FOR INDUSTRY 4.0

- Supported curriculum by Amazon Web Services Academy, IBM Academy and Microsft Academy to develop credible academic contents
- Curriculum aligned with industry needs
- Industry-supported professional certificates and R&D projects

BUSINESS ANALYTICS & TECHNOLOGY INNOVATION CENTRE (BATIC)

BATIC is Malaysia's largest finance lab in collaboration with Bloomberg, a global financial, software and data company

PREPARATION FOR PROFESSIONAL CERTIFICATES

- Oracle Database Certified Associate
- CompTIA Network+
- Oracle Certified Associate, Java Programmer
- AWS Certified Cloud Practitioner

aws academy

INDUSTRY STRENGTH FINAL YEAR PROJECTS

Students are provided with opportunities to work on real-world projects with industry partners.

CENTRES OF EXCELLENCE

- SAS Data Science
- FutureLab Industry Mentoring

sas THE POWER TO KNOW.

FUTURE LAB

EXCELLENT TEACHING FACULTY

- 80% of the lecturers have over 10 years of teaching and industry experience
- All lecturers have the minimum of a Master's qualification

REAL-WORLD APPROACH INTERACTIVE TEACHING & LEARNING

Interactive learning actively engages students in wrestling with learning material. It reinvigorates the classroom for both lecturers and students. Besides, it can strengthen their crictical thinking and problem-solving skills using a much more holistic approach to learning.

1:20

LOW CLASS LECTURER -STUDENT RATIO

HELP INDUSTRY ADVISORY BOARD

INDUSTRY ENDORSEMENT & SUPPORT

An Industry Advisory Board (IAB) was established by the Faculty of Computing and Digital Technology to ensure that the IT programmes offered are relevant and effective for its undergraduates; and to strengthen the department's ties with the computing industry. The IAB consists of senior industrialists and professionals with local and global representation, e.g., HT Consulting, IBM, Microsoft, Ernst & Young, MIMOS, ASTRO, PIKOM, MyBiz, FutureLab and SAS. The IAB advises on course content in the context of industrial trends and employment prospects, and supports the Faculty's activities in placing undergraduates in internship programmes and graduates in employment upon graduation. The IAB also provides advice on research activities and opportunities.

JOB PLACEMENTS

Job assistance and internships are available for our graduates via industry linkages and career exposure. Our students are highly sought-after by leading companies. Our students have been employed by Accenture, IBM, Citibank, Maxis Communications, Motorola Malaysia, HSBC (China), MIMOS, Sapura Holdings, Broadcast Network Systems (ASTRO), Shell, HP and many others.

"In today's world, it's all about collaboration and connecting. It is critical to create an eco-system where university students can connect to current technology so that they can learn the latest, as well as interact with the private companies that need the solution. We have successfully piloted such a project with HELP IT students, and intend to continue more programmes of this nature."

Mr Chris Chan
CEO, The Media Shoppe Bhd
Pikom Councillor
Co-Chair, HELP University IT Industry Advisory Board

"IT is no longer a secondary or support industry; it is the industry of the future, and some of the biggest companies worldwide are IT companies. Our aim in the Advisory Board is to encourage students of HELP to look at the opportunities and inspire them to build the Apples, Googles and Facebooks of the future in Malaysia."

Mr Ganesh Kumar Bangah
Co-Founder of MOL Global
Co-Founder of MOL Access Portal Bhd
Group CEO & President of MOL Ventures Pte Ltd
CEO of Friendster, Chairman of PIKOM
Member, HELP University IT Industry Advisory Board

"Today, using analytics to understand customers, improve product quality or detect fraud is a vital part of how an organisation uses data. However, as more and more devices connect to the Internet of Things, data from computer networks, factory sensors, personal wearables, smart meters and even pets come flooding in. Without a way to handle and make sense of it, all that data is useless. HELP University in partnership with SAS empowers students with the foundations of data science. This enables students to navigate this data minefield and monetise an organisation's data."

Dr Mark Chia
Founder, Mobius Group
Co-Chair, HELP University IT Industry Advisory Board

DIPLOMA IN INFORMATION TECHNOLOGY

(R3/0611/4/0071) (09/25) (A6528)

PROGRAMME DETAILS

- 2-year programme
- 14 weeks for full semester; 7 weeks for half a semester
- Students are required to complete 19 Academic courses and 5 HEP Compulsory Courses

ENTRY REQUIREMENTS

Any of the below

i. Possess SPM with at least THREE (3) credits in any subjects (inclusive of Mathematics or any equivalent qualification); OR

ii. A pass in Sijil Tinggi Persekolahan Malaysia (STPM) with a minimum Grade C of Grade Point (GP) 2.00 in any TWO (2) subjects and a credit in Mathematics at SPM level (or Mathematics equivalent to SPM); OR

iii. A pass in Sijil Tinggi Agama Malaysia (STAM) with a minimum grade of Maqbul (Pass) and a credit in Mathematics at SPM level (or Mathematics equivalent to SPM); OR

iv. Possess SKM Level 3 in a related field. (Candidates without Mathematics can be admitted subject to a thorough rigorous assessment to determine their competencies in Mathematics that are equivalent to SPM level); OR

v. A Certificate (Level 3, MQF) in a related field with at least a CGPA of 2.00; OR

vi. Other relevant and equivalent qualifications recognised by the Malaysian Government. (Candidates can be admitted if their admission qualification contains Mathematics subject(s) equivalent to Mathematics at the SPM level. Those without a pass in Mathematics at SPM level or equivalent can be admitted but required to take and pass the reinforcement Mathematics subject. The reinforcement Mathematics subject must be offered in the first semester or before enrolment with unconditional offer).

Notes:

- Candidates with a pass in Mathematics at the SPM level (or Mathematics equivalent to SPM) may be admitted if their admission qualification contains Mathematics subject(s) equivalent to Mathematics at the SPM level.
- Candidates with a pass in Mathematics at SPM level (or Mathematics equivalent to SPM) and without a Mathematics subject in their admission qualification need to take and pass reinforcement Mathematics subject that is equivalent to the SPM level. The reinforcement Mathematics subject must be offered in first semester or before enrolment with unconditional offer.
- Candidates with a credit in Computing-related subject(s) at the SPM level (or equivalent to SPM level) may be given preferential consideration.

INTAKES

January, May, August

COURSES

YEAR 1

- Introduction to Analysis and Design
- Introduction to Computer Architecture
- Programming Principles
- Computing Mathematics
- Calculus and Linear Algebra
- Web Development
- Object-Oriented Programming
- Networking and Data Communications
- Database Concepts & Practices
- Ethics in Computing

YEAR 2

- Fundamental of Operating Systems
- IT Mini Project
- User Centered Design
- Internship
- Mobile App Development
- Statistics and Probability
- Digital Security Essentials
- Cloud Computing Fundamentals
- Information Management

5 HEP COMPULSORY COURSES (INCLUDING MPU SUBJECTS)

MPU1 (choose 1) (Malaysian students)

- Penghayatan Etika dan Peradaban
- Falsafah dan Isu Semasa

OR

MPU1 (International students)

- Bahasa Melayu Komunikasi 1 / Malay Language for Communication

MPU2 / MPU3 (choose 1)

- Bahasa Kebangsaan A (for Malaysian students without a credit in SPM Bahasa Melayu)
- Introduction to Malaysian Tourism

MPU4 (choose 1)

- Co-curriculum – Sports 1
- Co-curriculum – Community Service 1

General Elective

- Communication 1

HELP Graduate Attribute Course

- Discovering Oneself

OVERVIEW

OUR DEGREE PROGRAMMES ARE POPULAR PATHWAYS FOR HIGH SCHOOL GRADUATES.

These pathways offer students a range of comprehensive industry-centric programmes.

Students have a choice to pursue the following specialisations at HELP:

- **Bachelor of Information Technology (Hons)**
- **Bachelor of Information Technology (Hons) Data Analytics**
- **Bachelor of Computer Science (Hons)**

PROGRAMME DETAILS

- 3-year Honours programme
- 30-32 courses to be completed in a minimum of 3 years
- 14 weeks for a long semester and 7 weeks for a short semester
- The programmes offer a wide selection of elective courses and specialized tracks that allow students to develop their knowledge and expertise in their areas of interest. (Note: Students are also allowed to take Free Electives from across any other programmes and faculties).

ASSESSMENT

- Coursework and assignments 50-100%
- Written examination 0-50%

INTAKES

January, May, August

The Recommended Electives (FIELD-specific and FREE/open) offered by the Faculty include:

- Advanced Database Systems
- Advanced Networking
- Advanced Web Development
- Analytics for Decision Making
- Applied Mathematical Studies
- Big Data Technologies
- Blockchain Applications and Smart Contracts
- Blockchain Development
- Blockchain Technology Concepts
- Business Analytics and Information Systems
- Cloud Solutions Development
- Computer Ethics and Cybersecurity
- Cybercrime and Digital Forensics
- Cyberdefense and Ethical Hacking
- Data Visualization and Data Mining
- Deep Learning for Computer Vision
- Enterprise Data Infrastructure
- Fundamentals of AI
- Internet of Things
- Introduction to Mobile Apps
- Introduction to Quantum Computing
- Machine Learning and AI
- Mobile Applications Development
- Natural Language Processing
- Object Oriented Enterprise Application Development
- Principles of Machine Learning
- Professional Communications for Business
- Startup Ideation
- Technopreneurship and Innovation

BACHELOR OF INFORMATION TECHNOLOGY (HONS) (2U1i – WORK-BASED LEARNING)

The Bachelor of IT also provides a Work-Based Learning (WBL) mode that follows the 2U1i formula, where a student spends 2 years at the university and 1 year in the industry. Students who take this mode will get to spend a significantly longer period attached to the industry, allowing them to gain more immersive and comprehensive real-world experience working on more substantial projects than the conventional mode that only offers a 3 month internship.

BACHELOR OF INFORMATION TECHNOLOGY (HONS)

(R3/481/6/0020) (03/25) (A5954)

The Bachelor of IT allows you to become a world class information technology professional with versatile skills to develop the most innovative and cutting-edge web applications, immersive mobile apps and inventive Internet of Things devices.

COURSES

YEAR 1

CORE COMPUTING
- Computer Systems and Organization
- Introduction to Database Systems
- Data Communications and Networking
- Introduction to Operating Systems
- Introduction to Programming

DISCIPLINE CORE
- Web Development Fundamentals
- Object Oriented Programming Fundamentals
- Discrete Mathematics

Choose 1 FREE ELECTIVE

YEAR 2

CORE COMPUTING
- System Architecture and Design

DISCIPLINE CORE
- User Experience Design
- Advanced Database Systems
- Software Engineering Principles
- Cloud Computing

FIELD ELECTIVES
- Web Programming
- Cloud Computing
- Internet of Things
- Introduction to Mobile Apps

Choose 2 FIELD ELECTIVES and 1 FREE ELECTIVE

YEAR 3

DISCIPLINE CORE
- IT Project Management
- Cybersecurity and Ethics

PROJECT
- Final Year Project I
- Final Year Project II
- Industrial Internship

Choose 2 FIELD ELECTIVES and 1 FREE ELECTIVE

BACHELOR OF INFORMATION TECHNOLOGY (HONS) DATA ANALYTICS

(R2/481/6/0677) (08/25) (A6239)

The Bachelor of IT (Data Analytics) is a specialized program meticulously crafted to develop well-rounded professionals with the multifaceted competencies essential for success in the dynamic evolving field of data analytics through proficiency in analytical techniques and tools, whilst cultivating the ability to think critically, communicate effectively, and tackle complex data-related challenges.

COURSES

YEAR 1

CORE COMPUTING
- Computer Systems and Organization
- Introduction to Database Systems
- Data Communications and Networking
- Introduction to Operating Systems
- Introduction to Programming

DISCIPLINE CORE
- Web Development Fundamentals
- Discrete Mathematics
- Object Oriented Programming Fundamentals

SPECIALISATION & PROJECT
Analytics for Decision Making

Choose 1 FREE ELECTIVE

YEAR 2

CORE COMPUTING
- System Architecture and Design

DISCIPLINE CORE
- User Experience Design
- Advanced Database Systems
- Advanced Web Development

SPECIALISATION & PROJECT
- Data Visualization and Data Mining
- Enterprise Data Infrastructure

Choose 1 FREE ELECTIVE

YEAR 3

DISCIPLINE CORE
- IT Project Management
- Cybersecurity and Ethics
- Startup Ideation

SPECIALISATION & PROJECT
- Machine Learning and AI
- Big Data Technologies
- Final Year Project I
- Final Year Project II
- Industrial Internship

Choose 1 FREE ELECTIVE

BACHELOR OF COMPUTER SCIENCE (HONS)

(N/0613/6/0006) (08/27) (MQA/PA15760)

HELP University's Bachelor of Computer Science programme gives you the opportunity to be immersed at the very edge of technology and innovation. Our focus areas of Cybersecurity, Blockchain and Artificial Intelligence empower you to be leaders at the forefront of computing.

SPECIALISED TRACKS

Customised tracks have been curated for students to pursue hot topic areas of interest. The current tracks for this programme are as follows (Note: new tracks are introduced from time to time based on the latest technological developments, and students also do have the flexibility to mix & match electives based on their aspirations):

ARTIFICIAL INTELLIGENCE (AI)

The ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings, such as the ability to reason, discover meaning, generalize, or learn from past experience. AI is advancing at a tremendous rate and being incorporated in most modern software systems to produce more adaptable systems that produce very reliable and even creative output (e.g. via Generative AI). Courses covered include Fundamentals of AI, Principles of Machine Learning, Deep Learning for Computer Vision, and Natural Language Processing.

BLOCKCHAIN

A distributed database or ledger shared among a computer network's nodes, providing a secure and decentralized record of transactions that cannot be altered. It is increasingly used in a variety of secure applications including cryptocurrencies, decentralized finance (DeFi) applications, non-fungible tokens (NFTs), and smart contracts. Courses covered include Blockchain Technology Concepts, Blockchain Applications and Smart Contracts, and Blockchain Development.

CYBERSECURITY

Measures taken to protect against criminal or unauthorized use of electronic data. The losses incurred by governments, organisations and individuals to cyber criminal activities worldwide are in the sum of trillions of dollars, in addition to others forms of loses, making those with cybersecurity expertise much sought after. Courses covered include Cybercrime and Digital Forensics, Advanced Networking, Cyberdefense and Ethical Hacking, and Computer Ethics and Cybersecurity.

DATA ANALYTICS

The collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision making. The insights gained are essential to drive business performance and solve problems. Courses covered include Analytics for Decision Making, Statistics and Visualisation, Statistics for Data Science, and Data Mining and Machine Learning.

QUANTUM COMPUTING

Explores the fundamentals and highlights the potential future direction leveraging on the emerging power of quantum computing.

COURSES

YEAR 1

CORE COMPUTING
- Computer Systems and Organization
- Introduction to Database Systems
- Data Communications and Networking
- Introduction to Operating Systems
- Introduction to Programming

DISCIPLINE CORE
- Fundamentals of Artificial Intelligence
- Discrete Structures
- Web Development Fundamentals
- Object Oriented Programming Fundamentals

Choose 1 FIELD ELECTIVE

YEAR 2

CORE COMPUTING
- System Architecture and Design

DISCIPLINE CORE
- User Experience Design
- Software Engineering Principles
- Data Structures and Algorithms
- Computer Systems Engineering

FIELD ELECTIVE
- Front-End Web Development

FREE ELECTIVE
- Technopreneurship and Innovation

Choose 2 FIELD ELECTIVES and 2 FREE ELECTIVES

YEAR 3

DISCIPLINE CORE
- Parallel and Distributed Computing
- Cybersecurity and Ethics

PROJECT
- Final Year Project I
- Final Year Project II
- Industrial Internship

Choose 2 FIELD ELECTIVES and 1 FREE ELECTIVE

PROGRAMME ADMISSION REQUIREMENTS
Any of the below

BACHELOR OF INFORMATION TECHNOLOGY (HONS) BACHELOR OF INFORMATION TECHNOLOGY (HONS) DATA ANALYTICS	
i	A pass in **STPM** with a minimum Grade of C (GP 2.00) in any TWO (2) subjects
ii	A pass in **STAM** with a minimum Grade of Jayyid in any TWO (2) subjects
iii	A pass in **Matriculation or Foundation studies** with a minimum CGPA of 2.00
iv	**Diploma** (Level 4, MQF) **in Non-Computing** with a minimum CGPA of 2.75. Candidates with a CGPA below 2.75 but more than 2.50 can be admitted subject to a thorough rigorous assessment; AND a credit in: Mathematics at SPM level or its equivalent; OR Candidates with a pass in Mathematics at SPM level need to take and pass the reinforcement Mathematics subject that is equivalent to the SPM level. The reinforcement Mathematics subject must be offered in first semester or before enrolment with unconditional offer.
v	**Diploma in Computing fields** (Level 4, MQF) or equivalent with a minimum CGPA of 2.50. Candidates with a CGPA below 2.50 but more than 2.00 may be admitted subject to a thorough rigorous assessment
vi	**Diploma Kemahiran Malaysia (DKM) / Diploma Vokasional Malaysia (DVM) in Computing fields** with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval
vii	**Diploma Lanjutan Kemahiran Malaysia (DLKM) in Computing fields** with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval
viii	**Other relevant and equivalent qualifications recognised by the Malaysian Government.** (Candidates can be admitted if their admission qualification contains Mathematics subject (s) equivalent to Mathematics at the SPM level. If it is not equivalent, the reinforcement Mathematics subject equivalent to the SPM level must be offered in first semester or before enrolment with unconditional offer).

BACHELOR OF COMPUTER SCIENCE (HONS)	
i	A pass in **STPM** (Arts Stream) with a minimum Grade of C (GP 2.00) in any TWO (2) subjects
ii	A pass in **STAM** with a minimum Grade of Jayyid in any TWO (2) subjects
iii	A pass in **Matriculation or Foundation studies** with a minimum CGPA of 2.00
iv	**Any Diploma in Science and Technology** (Level 4, MQF) with a minimum CGPA of 2.75. Candidates with a CGPA below 2.75 but more than 2.50 can be admitted subject to a thorough rigorous assessment; AND a credit in: • Additional Mathematics at the SPM level or its equivalent; OR • Mathematics and any one of the Science, Technology or Engineering subjects at SPM level or its equivalent. Candidates need to take and pass the reinforcement Mathematics equivalent to Additional Mathematics at the SPM level. The subject must be offered in first semester or before enrolment with unconditional offer.
v	A pass in **STPM (Science Stream)** or its equivalent with a minimum Grade of C (GP 2.00) in Mathematics subject and ONE (1) Science / ICT subject
vi	**Diploma in Computing fields** (Level 4, MQF) or its equivalent with a minimum CGPA of 2.50 Candidates with a CGPA below 2.50 but more than 2.00 may be admitted subject to a thorough internal evaluation process
vii	**Diploma Kemahiran Malaysia (DKM) / Diploma Vokasional Malaysia (DVM) in Computing fields** with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval
viii	**Diploma Lanjutan Kemahiran Malaysia (DLKM) in Computing fields** with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approva
xi	**Other relevant and equivalent qualifications recognised by the Malaysian Government.** (Candidates can be admitted if their admission qualification contains Mathematics subject (s) equivalent to Additional Mathematics at the SPM level. If it is not equivalent, reinforcement Mathematics subject that equivalent to the SPM level must be offered in the first semester or before enrolment with unconditional offer).

ADDITIONAL REQUIREMENTS

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

- IELTS 5.0
- TOEFL (paper based): 410
- TOEFL (internet based): 35
- MUET: Band 3
- Equivalent qualification

Notes:

- Students are required to pass the reinforcement Mathematics before being allowed to take related core courses. The candidate can sit for any subjects that did not indicate Mathematics as a prerequisite.
- Reinforcement Mathematics can contribute to the overall graduating credit.
- Students from Matriculation / Foundation or its equivalent can be exempted from taking reinforcement Mathematics, provided that the Mathematics offered at that programme level is equivalent / more than the Additional Mathematics offered at an SPM level.

MASTER OF DATA SCIENCE

(N/481/7/0817) (07/25) (MQA/FA13820)

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.

PROGRAMME DURATION

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

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

ENTRY REQUIREMENTS

Master's Degree by Mixed Mode

i. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.75, as accepted by the HEP Senate; OR

ii. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.00 and not meeting a CGPA of 2.75 can be accepted subject to a thorough rigorous assessment as determined by the HEP; OR

iii. A Bachelor's degree (Level 6, MQF) in Non-Computing field with a minimum CGPA of 2.50 can be accepted subject to a thorough rigorous assessment as determined by the HEP to identify the appropriate prerequisite courses that equivalent to their working experience in the Computing or related fields; OR

iv. A Bachelor's degree (Level 6, MQF) in Non-Computing fields with a minimum CGPA of 2.50 can be accepted subject to appropriate prerequisite courses; OR

v. Other qualifications equivalent to a Bachelor's degree (Level 6, MQF) in Computing or related fields recognised by the Government of Malaysia must fulfil the requirement on item i or ii.

Additional Notes:

- Rigorous assessment can be done through interviews, portfolios, written tests, or any form of assessment.
- The prerequisite courses should cover the minimum requirements of the common knowledge area in Computing, such as Computer Architecture, Database Fundamentals, Network and Data Communication, Programming Fundamentals and System Analysis and Design Fundamentals that are equivalent to level 6. These courses must be offered as a prerequisite to related core courses.

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.

INTAKES

January, April, July and October

MODULES

PROGRAMMING FOR DATA SCIENCE

Equips students with fundamentals of programming using a high-level programming language to solve problems focusing on 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.

APPLIED MACHINE LEARNING

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

DATA MANAGEMENT

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

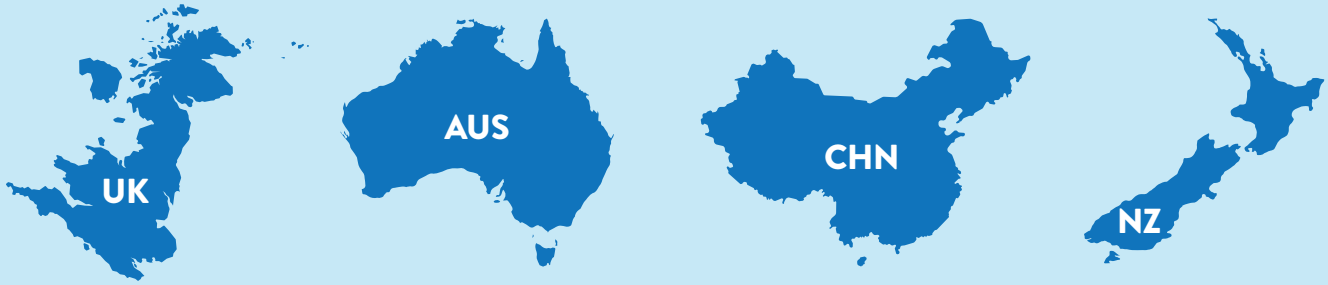
RESEARCH METHODS

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.

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.

PATHWAYS



UNIVERSITY OF ESSEX (2+1)
CARDIFF UNIVERSITY (1+2)
SWANSEA UNIVERSITY (1+2)
UNIVERSITY OF ESSEX (2+2)

THE UNIVERSITY OF QUEENSLAND (2+1)
THE UNIVERSITY OF ADELAIDE (1+2)
THE UNIVERSITY OF QUEENSLAND (2+1½)
UNIVERSITY OF TECHNOLOGY SYDNEY (2+1½)
THE UNIVERSITY OF ADELAIDE (2+2)

BEIJING JIAOTONG UNIVERSITY (2+2)
BEIJING JIAOTONG UNIVERSITY (2+2)

THE EASTERN INSTITUTE OF TECHNOLOGY (2+1½)

HELP UNIVERSITY DEGREE YEAR 3
BIT (HONS)
BIT (HONS) DATA ANALYTICS

HELP UNIVERSITY DEGREE YEAR 2

HELP UNIVERSITY DEGREE YEAR 1

HELP UNIVERSITY DIPLOMA IN INFORMATION TECHNOLOGY

STPM/UEC/A-LEVELS or equivalent

FOUNDATION

SPM/O-LEVELS or equivalent

INSPIRING TECHNOPRENEURS

GOOGLE SELECTS HELP IT GRADUATES FOR START-UP MENTORING

Jarvis Store, founded by three enterprising HELP Bachelor of Information Technology (Hons) graduates, Frianto Moerdowo, Gusindra Divanatha and Agus Yusida, was selected to attend the Google Launchpad Accelerator Program at Googleplex, Silicon Valley.

Jarvis Store, rated one of the best start-up companies in Indonesia, was one of 24 smart companies from around the world selected by Google to attend the program.

"The Bachelor of IT from HELP University provided me with a solid foundation to enter the IT industry. I am very fortunate to have such a great team of dedicated IT lecturers – they not only inspired me; they taught, mentored and encouraged me to be confident and courageous in my entrepreneurial endeavours!"

- **Frianto, CEO of Jarvis Store**

From left: Enterprising Jarvis Store founders Gusindra Divanatha (COO), Frianto Moerdowo (CEO), and Agus Yusida (CTO)

"Studying in HELP has not only given me the tertiary knowledge, but also critical skills like project management, discipline and focus to achieve a desired goal. It has given me an experience of internationalisation and globalisation, through my interactions with foreign students and lecturers, as well as opened up a world view for me. This is critical for my entrepreneurship ventures."

Vincent Cheng Kim Loong
Bachelor of Information Technology
CEO of Jevine Solutions
Founder of Malaysian Business Network

"The knowledge and experiences I gained from the Bachelor of Information Technology degree emphasises practical development of systems and applications pertaining to business contexts. It has prepared me to emerge in the IT industry as a System Analyst in a multinational company. The experience gained working in a multinational company has widened my knowledge in the management of an organisation, running a business and communicating with different levels of individuals. This knowledge enabled me to establish Enovade Sdn Bhd."

Lim Chun Chai
Bachelor of Information Technology (Hons)
Managing Director, Enovade Sdn Bhd

>99% OF OUR GRADUATES ARE EMPLOYED UPON GRADUATION

"I have found IT to be incredibly fast-paced and there is always room for innovation and creativity. The courses that I studied in my BIT (Hons) degree and the interactions that I had with my lecturers have most certainly equipped me with the necessary skills for my current employment at Ernst & Young (Singapore)."

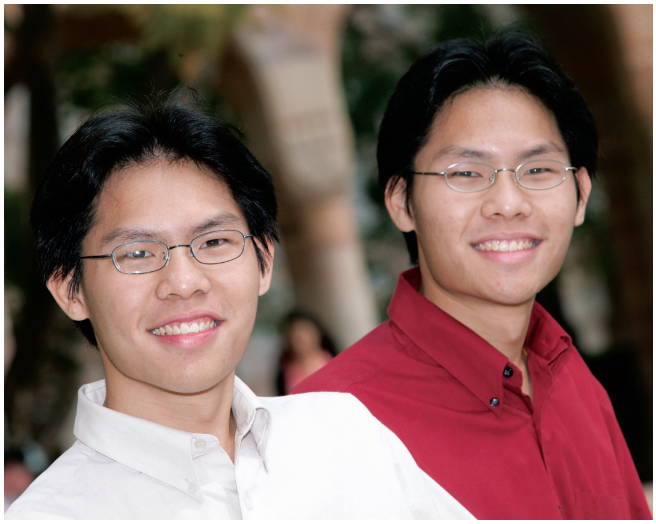
Ooi Her Wuen

Bachelor of Information Technology (First Class Honours), HELP University
Tan Sri Datuk Paduka Dr Hajjah Saleha Outstanding Achievement Award
President's Award
Senior Associate, Advisory Services, Ernst & Young (Singapore)

"I know I made the right decision to study this course because I am always enthusiastic about learning and applying IT knowledge and skills to create something great and beneficial for people. HELP provided me with a good and conducive learning environment. The course is well-structured and I gained a lot of useful and important knowledge from the subjects taught at HELP. Moreover, the lecturers here are very professional and approachable."

Su Sheng Loong

Bachelor of Information Technology, University of Queensland, on 2+1 credit transfer programme offered by HELP IT Department
Senior Member of Technical Staff (SMTS), Software Engineering with Salesforce, San Francisco



"The Bachelor of Information Technology credit transfer programme between HELP and The University of Queensland (UQ) is an excellent programme that encompasses a good mix of theory and practical learning experiences. Having dedicated staff that consistently win teaching awards and with links to industry partners, this programme is recognised globally and prepares you well for the work force."

Twins John Ngui Kin Choong and Arthur Ngui Kin Seng

Both graduated with a HELP Bachelor of Information Technology (First Class Honours); they are currently working in Queensland.

"HELP University has made me strive for knowledge and taught me many different programming paradigms which can be used to explore many different programming languages. Courses such as modelling using UML, all game development courses and the final year project have prepared me to organise and plan new projects. It has been a great experience studying at HELP University. The lecturers teach from experience and demonstrate each theory with examples."

Khalid Mohammad Saleem

Bachelor of Computer Science (First Class Honours) Games and Interactive Media
Software Engineer, MIMOS

UNIVERSITY OF QUEENSLAND CREDIT TRANSFER PROGRAMME

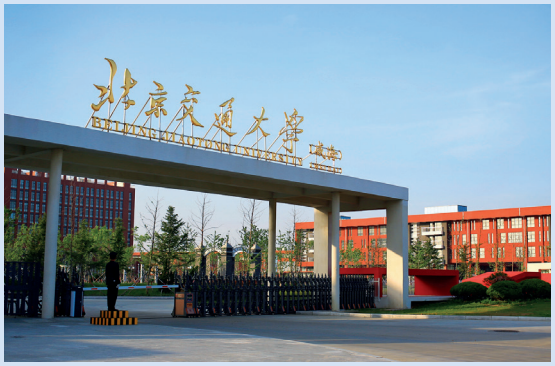
- **1 year at HELP University (Diploma in Information Technology) + 2 years at the University of Queensland (Bachelor of Information Technology)**
- **2 years at HELP University (Diploma in Information Technology) + 1 year at the University of Queensland (Bachelor of Information Technology)**
- **2 years at HELP University (Diploma in Information Technology) + 1 year at the University of Queensland (Bachelor of Information Technology Honours*)**
- **2 years at HELP University (Diploma in Information Technology) + 1½ years at the University of Queensland (Bachelor of Computer Science)**
- **2 years at HELP University (Diploma in Information Technology) + 1½ years at the University of Queensland (Bachelor of Engineering (Software) Honours*)**

"As an external examiner for HELP University for the past 18 years, I have been constantly impressed by the dedication of the staff of the HELP IT Department. Their standards meet with those set by The University of Queensland (UQ) and those HELP students who transfer to UQ are first rate scholars".

Paul Bailes
BSc (Hons), PhD FACS FIEAust
Emeritus Professor of Computer Science
The University of Queensland

The Bachelor of Engineering, Bachelor of Information Technology and Bachelor of Computer Science are provided as part of an exclusive credit transfer arrangement with The University of Queensland. The BEng and BIT are The University of Queensland's internationally recognised specialist degrees in engineering, computer technology and applications. The degrees include a central core comprising compulsory study in computer science and several affiliated areas.

BEIJING JIAOTONG UNIVERSITY CREDIT TRANSFER PROGRAMME



- **2 years at HELP University (Diploma in Information Technology) + 2 years at the Beijing Jiaotong University (Bachelor of Software Engineering)**
- **2 years at HELP University (Bachelor of Information Technology) + 2 years at the Beijing Jiaotong University (Bachelor of Software Engineering)**

Beijing Jiaotong University (BJTU) is a national research university that has been around for 117 years. It is also one of the "211 Project" universities under the direct administration of the Ministry of Education (MoE), China. Currently with 2,842 employees, 14,000 undergraduate students, 5,900 post-graduate students, 2,200 doctoral candidates, 5,000 in-service professional degree graduate students, 724 international students and more than 100,000 graduates, BJTU puts great emphasis on international cooperation in education.

Beijing Jiaotong University (BJTU) is located in Beijing's Haidian District, which is known as, "China's home of higher education". To the north of the university is Zhong-guancun (Silicon Valley). This university covers an area of 73 acres and is composed of east and west campuses. These campuses have amazing facilities and a beautiful environment.

UNITED KINGDOM

UNIVERSITY OF ESSEX

- 2 years at HELP University (Diploma in Information Technology) + 1 year or 2 years at the University of Essex (BSc Computer Science / BEng Computer Networks / BEng Computer with Electronics / BEng Computer Systems Engineering)
- BSc Computer Games (1+2)
- BSc Computer Science (1+2) or (2+1)
- BEng Computer Networks (1+2) or (2+1)
- BEng Computer with Electronics (1+2) or (2+1)
- BEng Computer Systems Engineering (1+2) or (2+1)

UNIVERSITY OF THE WEST OF ENGLAND

- 2 years at HELP University (Diploma in Information Technology) + 2 years at University of the West of England (BSc (Hons) Software Engineering for Business / BSc (Hons) Business Computing / BSc (Hons) IT Management for Business)

SWANSEA UNIVERSITY

- BSc Computer Science (1+2)

NORTHUMBRIA UNIVERSITY

- MSc Computer Science
- MSc Business Information Systems Management
- MSc Computer Network Technology

AUSTRALIA & NEW ZEALAND

THE UNIVERSITY OF QUEENSLAND

- 2 years at HELP University (Diploma in Information Technology) + 1½ years at The University of Queensland (Bachelor of Information Technology / Bachelor of Computer Science)
- Bachelor of Information Technology (2+1)
- Bachelor of Information Technology (Software Design) (2+1)
- Bachelor of Computer Science (2+1)

MACQUARIE UNIVERSITY

- 2 years at HELP University (Diploma in Information Technology) + 2 years at the Macquarie University (Bachelor of Information Technology)
- 2 years at HELP University (Diploma in Information Technology) + 2 years at the Macquarie University (Bachelor of Cyber Security)
- 1½ years HELP University (Bachelor of Information Technology (Hons) / Bachelor of Information Technology (Hons) Data Analytics) + 1½ years at the Macquarie University (Bachelor of Information Technology)
- 1½ years HELP University (Bachelor of Information Technology (Hons)) + 1½ years at the Macquarie University (Bachelor of Cyber Security)

THE EASTERN INSTITUTE OF TECHNOLOGY (NZ)

- 2 years at HELP University (Diploma in Information Technology) + 1½ years at the Eastern Institute of Technology (Bachelor of Computing Systems)

UNIVERSITY OF TECHNOLOGY SYDNEY

- 2 years at HELP University (Diploma in Information Technology) + 1½ years at the University of Technology Sydney (Bachelor of Science in Information Technology)
- Bachelor of Science in Information Technology (Data Analytics) (2+1)
- Bachelor of Science in Information Technology (Enterprise Systems Development) (2+1)

WESTERN SYDNEY UNIVERSITY

- Bachelor of Data Science (1+2)

MURDOCH UNIVERSITY

- 1 Year at HELP University (Bachelor of Information Technology (Hons) / Bachelor of Information Technology (Hons) Data Analytics) + 2 Years at Murdoch University (Bachelor of Information Technology)

THE UNIVERSITY OF ADELAIDE

- 2 years at HELP University (Diploma in Information Technology) + 2 years at the University of Adelaide (Bachelor of Information Technology / Bachelor of Computer Science)
- Bachelor of Information Technology (1 + 2)
- Bachelor of Computer Science (1 + 2½)

CHINA

BEIJING JIAOTONG UNIVERSITY

- 2 years at HELP University (Diploma in Information Technology) + 2 years at the Beijing Jiaotong University (Bachelor of Software Engineering)
- 2 years at HELP University (Bachelor of Information Technology) + 2 years at the Beijing Jiaotong University (Bachelor of Software Engineering)

HELP UNIVERSITY SUBANG BESTARI CAMPUS AND THE BUSINESS ANALYTICS AND TECHNOLOGY INNOVATION CENTRE (BATIC)

WE ARE BIGGER, BETTER, BOLDER

- A RM25 million **Business Analytics and Technology Innovation Centre (BATIC)** for training in online live stock-trading with data analytics
- Collaboration with top venture and technology groups to develop the HELP Technology Hub.


Lecture Theatre


Rooftop Garden


Library


Common Area


Student Lounge


BATIC IT Lab


BATIC Lounge

ACADEMIC TEAM

Prof Dr R Logeswaran
BEng(Hons) Computing (London), MEngSc (MMU), PhD (MMU)
Professor & Dean
Prof Loges has over 25 years of academic teaching and leadership experience at a number of local and international universities in Malaysia, India and Korea. He has also headed several Research Centres in Image Processing and Data Analytics. He studied his undergraduate degree at Imperial College London, United Kingdom, both Masters and PhD at Multimedia University (MMU), and post-doctoral research in Korea. His research interests are in image processing, data compression, artificial intelligence and data science, with over 150 publications in books, peer-reviewed journals and international conference proceedings. Prof Loges has been a recipient of several scholarships and awards, including Telekom Malaysia, JCS, IEEE, Brain Gain Malaysia, Brain Korea21 and a medal for long and commendable service from the Malaysian government. He regularly speaks at internationals events and actively volunteers as a judge in STEM and innovation competitions.

Dr Tang U-Liang
BSc (Hons) Maths, PhD (NUS)
Dr Tang taught in Singapore Polytechnic for nine years. As consultant to the Polytechnic's Data Science and Analytics Center, he successfully applied advanced clustering techniques to understand job skill requirement profiles for the industry. He also worked closely with students to help them develop and deploy AI and ML-based applications for various companies. His research interests are developing Natural Language-based AI to enhance educational outcomes in students. Dr Tang has a keen interest in adult education and training.

Ms Anitha Velayutham
BIT (Info Sys), MBA (Int Business) (CSturt)
Senior Lecturer
Anitha is a specialist in Computer Ethics and Security. She teaches and develops courses in Security, Management and System Development for undergraduates and postgraduates.

Ms Seetha Letchumi Sukumaran
BSc (CompSc) Hons, MSc (Comp Sc) (USM)
Senior Lecturer
Seetha specialises in C++, web development and open source operating system (Linux). Her experience includes teaching and product development.

Mr Kok Chye Hock
BSc (Maths & Comp Sc) Hons (UKM), MIT (CSturt)
Senior Lecturer
Chye Hock has over 20 years of teaching experience. He specialises in Java programming.

Ms Naline Shanmugam
BIT (Artificial Intell) Hons (UKM), MSc (Multimedia) (Malaya)
Senior Lecturer
Naline has more than five years of teaching experience in C programming, Visual Basic programming, Introduction to Information Technology, and Internet Technology.

Mr Koon Kim Peh
BSc (Software Dev) (UTeM), MSc (Comp Sc) (UTAR)
Senior Lecturer
Prior to teaching, Kim Peh worked for over 3 years as a software engineer in banking. He specialises in mobile computing and software engineering (UML). His interests include mobile application development, and data science. He has spent over 5 years in the private education industry.

Mr Manibelen Ratnasamy
MSc (Comp Sc), Post Grad Dip in Computer Science
Senior Lecturer
Manibelen has more than 15 years of industry experience in a highly automated IT/Factory Information System/Computer Integrated Manufacturing environment. Involved in two technology transfer programs from LSI Logic, US to Silterra (M) and Seagate Ireland to Seagate (Johor). Involved in setting up a number of Data Centers for large manufacturing facilities. He also has more than 10 years of academic experience in private education teaching subjects related to computer science, data science, networking and web development.

Dr Shapla Khanam
PhD (Cybersecurity) (UM), MEng in Telecommunications Engineering (UM), BSc (Comp Sc) Hons (IIUM)
Senior Lecturer
Dr Shapla Khanam has received her PhD from University of Malaya in 2022. She also worked as a researcher in University of Malaya (UM) for long time. During her PhD, she helped her students to develop Cybersecurity solutions using Deep Learning and Machine Learning for Internet of Things (IoT). She was involved with IEEE-UM student branch and Women in Engineering for several years. She has published several articles in journals and international conferences. Her research interests include Intrusion Detection, Network Security, Machine Learning, Deep Learning, IoT and WSNs.

Dr Rachel Saw Yi Jiau
PhD (Electrical and Computer Systems Engineering) (Monash), BEng (Electrical and Computer Systems Engineering) (Monash)
Lecturer
Dr Rachel Saw has received her PhD in electrical and computer systems engineering from Monash University in 2022. She has worked as a researcher in the Intelligent Lighting Laboratory and a laboratory coordinator at Monash University. She has published in a Q1 journal on her research in the optimization of circadian lighting design and presented her research in one of the top international lighting conferences in the world. Her research interests include circadian lighting from psychological and physiological viewpoints, the mathematical optimization for the design of circadian lighting and she is currently supervising several projects focusing on the design of an IOT and AI-based smart greenhouse system for HELP University.

Ms Umi Najjah
MSc IT (MARA, BSc (Hons) Information System Engineering (MARA), Dip in Comp Sc (MARA)
Lecturer
Umi Najiah Ahmad Razimi, a passionate educator, blends over a decade of industry and academic experience. Her commitment to academic excellence is evident, as she actively contributes to the educational landscape. In her role as a researcher, she explores innovative teaching methods, software development, AI, image processing, and data visualization, providing valuable insights. Umi's unwavering dedication to excellence and her influential role in academia serve as a driving force for the next generation of IT professionals.

Ms Intan Adhani
BIT (Hons) Business Information System, MSc IT (UTP)
Lecturer
Nur Intan Adhani is a professional with nearly nine years of industry experience, excels in mobile app development with a focus on Augmented Reality (AR) and multimedia applications. Beyond technical proficiency, Nur Intan Adhani is recognized for fostering engaging user experiences that align with market trends. She has not only excelled in technical proficiency but also shared knowledge through impactful training sessions. Beyond development, Nur Intan Adhani is deeply interested in Human-Computer Interaction (HCI) and explores emerging immersive technologies.

Mr Sugindran Krishnan
MSc (Project Mgmt) (UM), BIT (Hons) (UUM)
Lecturer
Sugindran has over 12 years working experience in various specializations including automation engineering, IT consultation, digital marketing, graphic design and project management. His passion and interests are in tech startups and digital innovations.

HELP University
university of achievers
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SCAN TO FOLLOW US
ON SOCIAL MEDIA

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MOHE Approval Number: DU208(W)

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