

Tech as a CAREER

*The world of Computer Science and
Information Technology*

"Tech as a Career" is designed to introduce you to the exciting world of technology and its vast career opportunities. This module will explore key areas within Computer Science, highlight the growing demand for tech professionals, and provide insights into the skills and knowledge required for success. Whether you're interested in artificial intelligence, cybersecurity, software development, or data science, this module will guide you in discovering the diverse paths a career in tech can offer.



COMPUTER
SCIENCE

By PixelX (TCS OCC 8)

Introduction

Technology is the future, as they say. AI is slowly taking over our lives as we hear more and more talk about tech. If you are interested in AI, robotics, network systems, web development, game development or anything related to the computer, you may want to consider pursuing Computer Science or any tech-related field as a career. This module will hopefully help clear things up about the intimidating world of Computer Science and Information Technology.

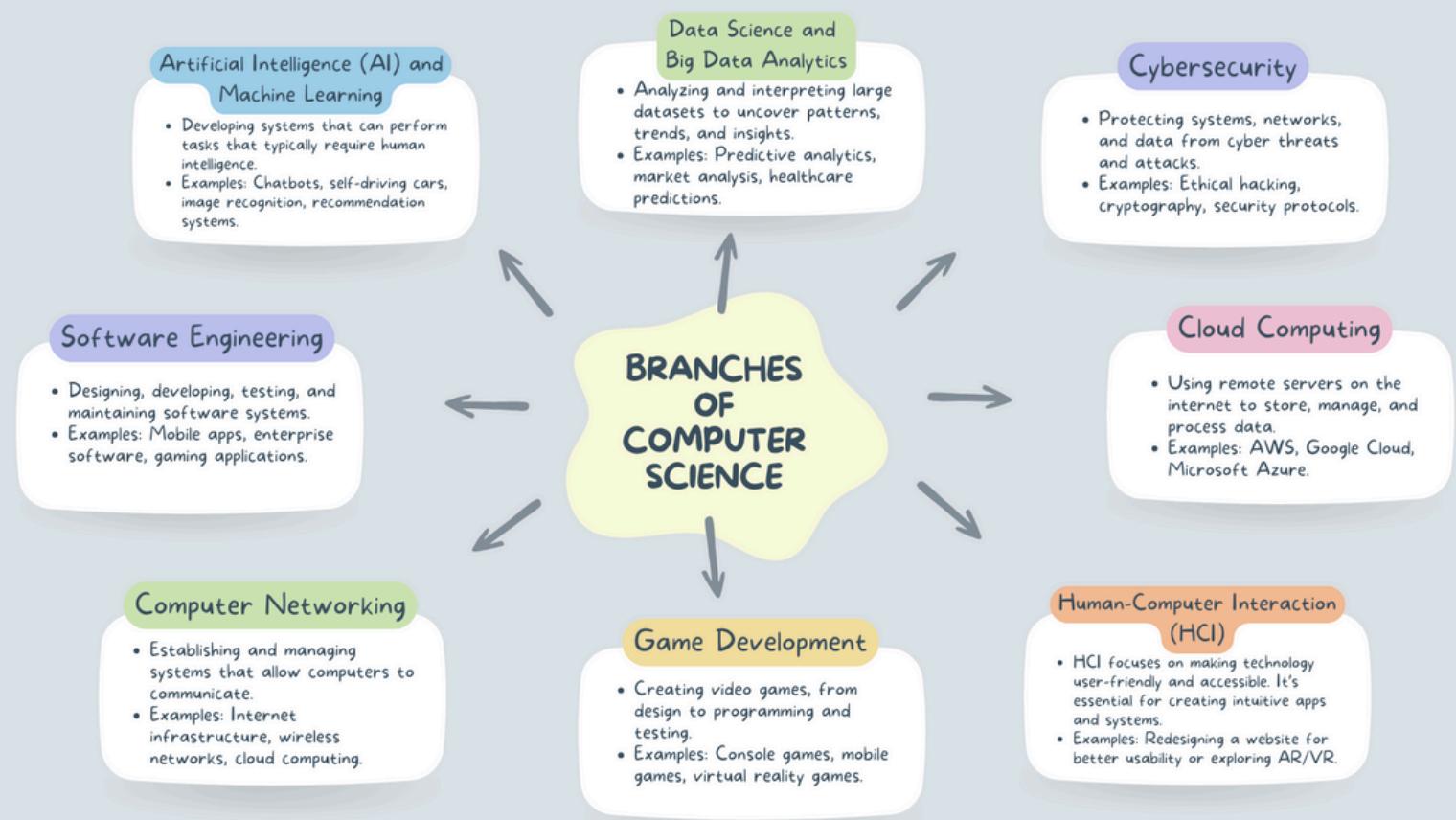
What is Computer Science?

It's not just programming and coding. According to Wikipedia, it is the study of computation, information, and automation. It consists of many fields like Software Engineering, Artificial Intelligence, Database Systems, Computer Networking and Communication etc. It spans a wide range of topics, so you really have to find out what you like about Computer Science. Do you like to develop websites? Or do you like looking at big datasets and analyse how they relate to one another? Maybe you like to tinker with routers and switches? The possibilities are very vast, so take time to discover what you like.



BRANCHES OF COMPUTER SCIENCE

Computer Science is a vast and dynamic field that covers a wide range of disciplines, each contributing to the development of technology that shapes our world. From building intelligent systems to safeguarding networks and creating immersive digital experiences, the branches of Computer Science open doors to exciting opportunities. By understanding these specialized areas, you can discover where your interests align and explore the countless ways technology can solve real-world problems and drive innovation.



What is your *interest* in Computer Science?

Secondary school:

It is possible to take Computer Science as an SPM subject, if your school offers it. Here are the things you will learn (and much more) if you do decide to take the subject.

Form 4 - Java, Database, Human Computer Interaction

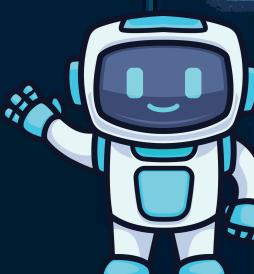
Form 5 - Computer Ciphering and Deciphering, Technology-related Laws, Computer System and Organization (Logic Gates), Database (SQL), Web-based Programming (HTML, CSS)

WHERE TO START?

Even if your school doesn't offer the subject, don't worry! There are plenty of free or affordable online resources. **Self-learning opportunities** through platforms like Khan Academy, FreeCodeCamp, and W3Schools that provides beginner-friendly tutorials.

Does this mean you have to take Computer Science (CS) at a higher education level?

No! Studying CS in school does not lock your career path to tech. You can pivot to other fields like Engineering, Economics and Business for higher studies. Taking CS in school also does not mean you will outperform your peers in university.



PERMOHONAN KEMASUKAN KE PROGRAM MATRIKULASI SESI 2024/2025

Tarikh Permohonan



Permohonan dibuka
15 Disember 2023

Permohonan ditutup
31 Mac 2024

Jurusan yang ditawarkan

- ✓ Jurusan Sains
- ✓ Jurusan Perakaunan
- ✓ Jurusan Kejuruteraan
- ✓ Jurusan Perakaunan Profesional



Imbas untuk maklumat lanjut berkaitan Program Matrikulasi KPM

PERMOHONAN ADALAH PERCUMA

Keistimewaan



- Laluan pantas ke universiti
- Yuran pengajian & penginapan percuma
- Bantuan Sara Hidup Pelajar bagi yang layak
- Diiktiraf 50 universiti antarabangsa
- Sijil Matrikulasi KPM boleh memohon berkhidmat dalam Perkhidmatan Awam pada Gred 29

[f](#) [X](#) [YouTube](#) Program Matrikulasi KPM

[tiktok](#) [Instagram](#) Matrikulasi KPM

#matrikulasiidihatiku #materajukejayaanmasadepan



JOM MASUK MATRIK

PELAJAR LEPASAN SPM 2020 DIGALAKKAN MEMOHON !!

Siapa yang layak memohon?

Semua pelajar lepasan SPM aliran sains dan aliran teknikal dari Sekolah Kerajaan, Sekolah Bantuan Kerajaan, Sekolah Swasta, MRSM dan lain-lain layak dan digalakkan memohon ke Jurusan Sains Program Matrikulasi KPM.

Apa yang anda akan belajar?

Aliran Sains Hayat	Aliran Sains Fizikal	Aliran Sains Komputer
1. Biologi	1. Fizik	1. Sains Komputer
2. Kimia	2. Kimia	2. Biologi
3. Fizik	3. Matematik	3. Kimia
4. Matematik	4. Sains Komputer	4. Matematik

Sambung belajar bidang apa?

Perubatan, Kejuruteraan, Pergigian, Farmasi, Sains, Teknologi Maklumat, Seni Bina, Kejurutaran, Sains Forensik, Fisioterapi, Pendidikan dan lain-lain pengajian dalam bidang STEM.

Sambung belajar di mana?

- Semua Universiti Awam - Malaysia
- Universiti Luar Negara (United Kingdom, Australia, New Zealand dan Jepun)
- Universiti Swasta - Malaysia

Kolej manakah Jurusan Sains ditawarkan?



Tarikh tutup permohonan: 15 APRIL 2021
Permohonan secara dalam talian: matrikulasi.moe.gov.my/

#MATRIKULASIDIHATIKU #MATRIK1STCHOICE

Matriculation is one of the pathways to pursue a university degree in computer science.



JOM MASUK MATRIK

JURUSAN KEJURUTERAAN

PELAJAR LEPASAN SPM 2020 DIGALAKKAN MEMOHON !!

Siapa yang layak memohon?

Semua pelajar lepasan SPM aliran sains dan aliran teknikal dari Sekolah Kerajaan, Sekolah Bantuan Kerajaan, Sekolah Swasta, MRSM dan lain-lain layak dan digalakkan memohon ke Jurusan Kejuruteraan Program Matrikulasi KPM. Pelajar sekolah menengah teknik amat dialu-alukan.

Sambung belajar bidang apa?

Kejuruteraan, Seni Bina, Keselamatan dan Kesihatatan Pekerja dan lain-lain pengajian dalam bidang STEM.

Sambung belajar di mana?

- Universiti Awam - Malaysia
- Universiti Luar Negara (United Kingdom, Australia, New Zealand dan Jepun)
- Universiti Swasta - Malaysia

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Apa yang anda akan belajar?

Aliran Kejuruteraan Elektrik & Elektronik	Aliran Kejuruteraan Mekanikal
1. Kejuruteraan Elektrik & Elektronik	1. Kejuruteraan Mekanikal
2. Matematik	2. Matematik
3. Kimia	3. Kimia
4. Fizik	4. Fizik

Aliran Kejuruteraan Awam	Aliran Asas Kejuruteraan
1. Kejuruteraan Awam	1. Asas Kejuruteraan
2. Matematik	2. Matematik
3. Kimia	3. Kimia
4. Fizik	4. Fizik

#MATRIKULASIDIHATIKU #MATRIK1STCHOICE

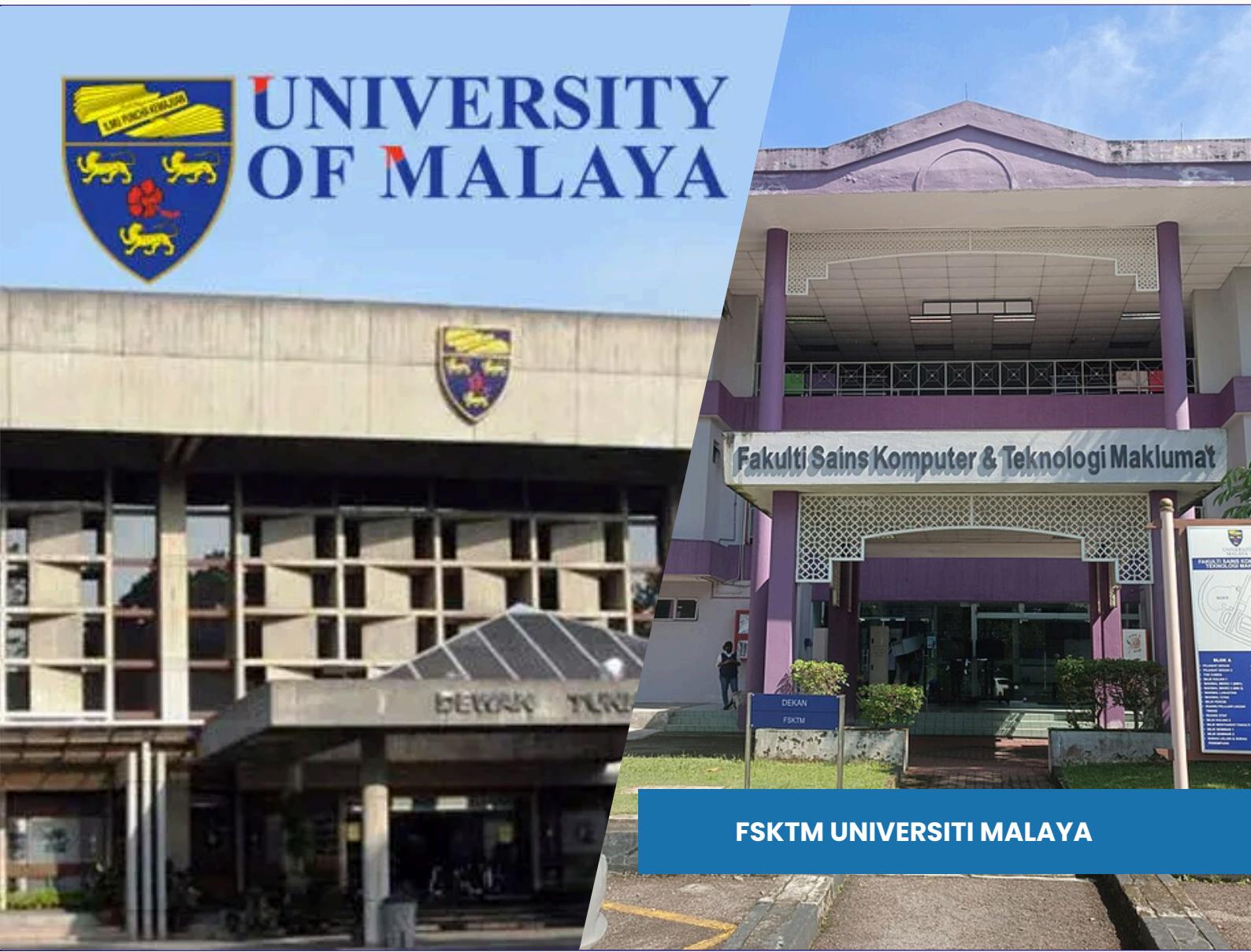


What if I start in university?

That's fine too. Many people begin their tech journey at university, which provides a structured environment to dive deeper into Computer Science and Information Technology. Universities offer access to knowledgeable lecturers, valuable resources, and peers who share similar interests, making it an ideal starting point.

The University of Malaya offers the following six undergraduate programs in Computer Science:

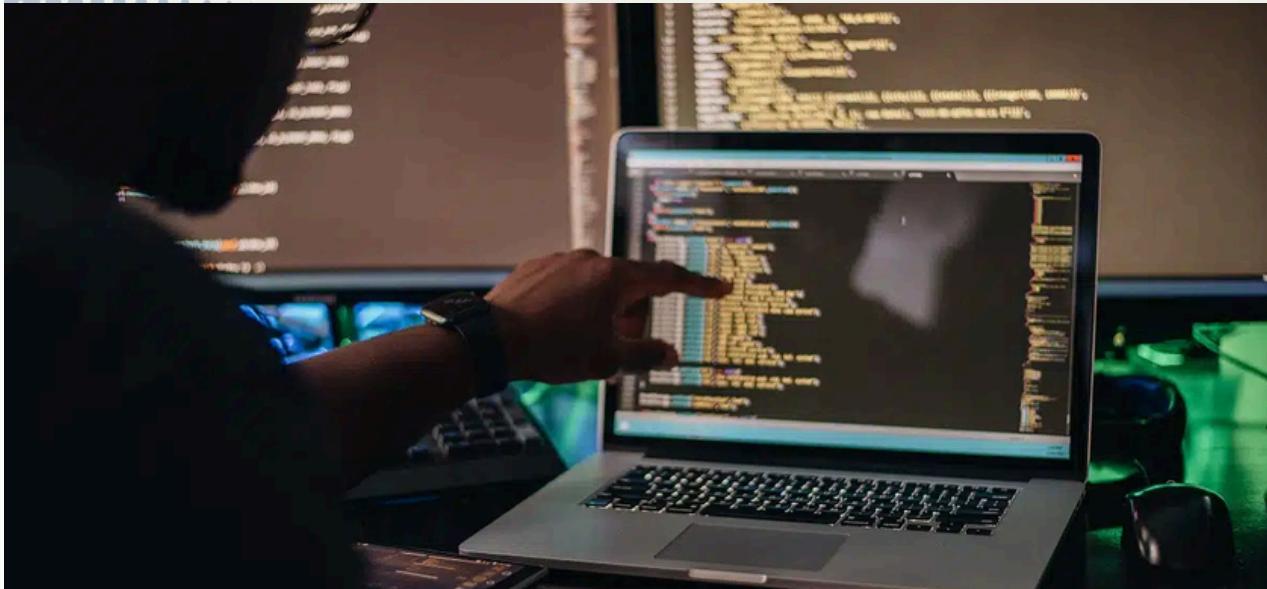
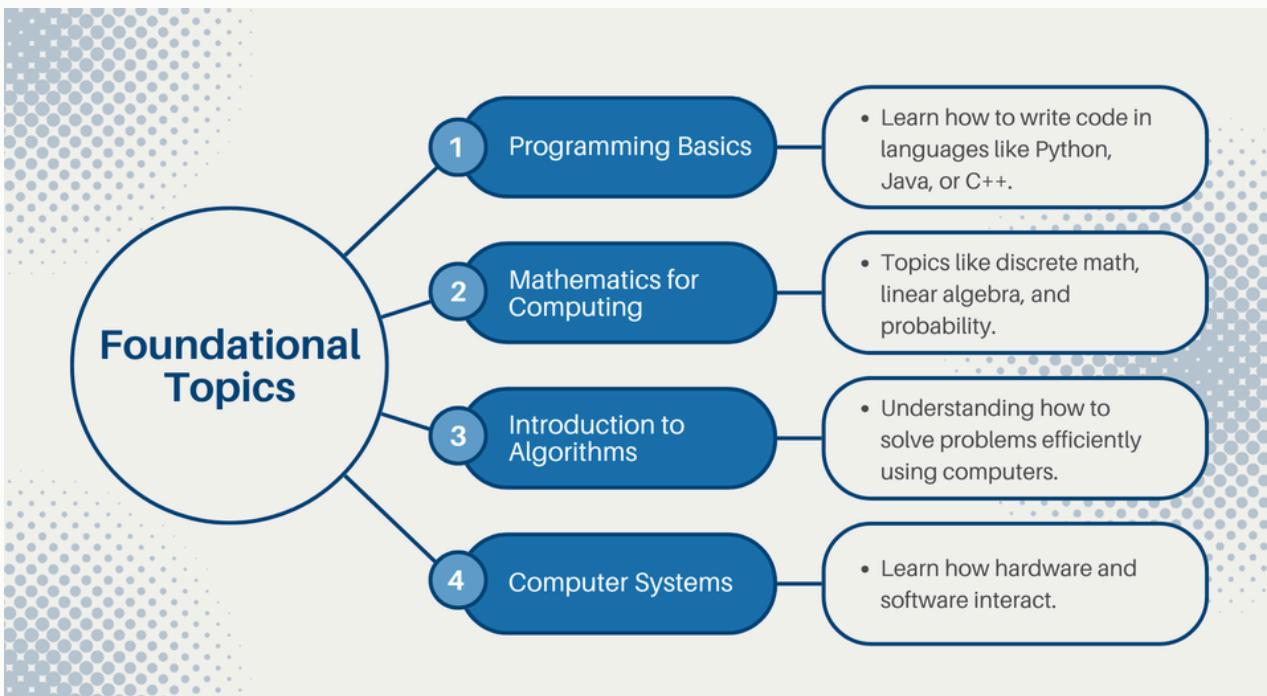
- Bachelor of Computer Science (Artificial Intelligence)
- Bachelor of Computer Science (Computer System and Network)
- Bachelor of Computer Science (Information Systems)
- Bachelor of Computer Science (Software Engineering)
- Bachelor of Computer Science (Multimedia Computing)
- Bachelor of Computer Science (Data Science)



```
40
41
42     @classmethod
43     def from_settings(cls, settings):
44         debug = settings.getbool('SUPERUSER_DEBUG')
45         return cls(job_dir(settings), debug)
46
47     def request_seen(self, request):
48         fo = self.request_fingerprint(request)
49         if fo not in self._fingerprints:
```

What to Expect in a Computer Science Program?

In university, you'll cover a variety of foundational topics in your first year, such as:



As you advance in a Computer Science program, you'll dive into:

- **Data Structures:** Arrays, linked lists, trees, and graphs for efficient data handling.
- **Operating Systems:** Managing hardware, memory, and processes.
- **Databases:** Designing and querying systems using SQL and NoSQL.
- **Networking:** Understanding protocols, routing, and cybersecurity basics.
- **Artificial Intelligence:** Building systems that learn and make decisions.



Choose electives in areas like:

- Web Development
- Cybersecurity
- Game Development
- Data Science
- Cloud Computing



Capstone Projects and Internships

You'll apply your knowledge through real-world projects, such as developing apps or analyzing data, while internships provide valuable hands-on industry experience to prepare you for your career.

Skills You'll Develop

- Problem-solving, critical thinking, and teamwork.
- Proficiency in programming languages and tech tools.

Why Choose a Career in Tech?

Tech careers are in **high demand**, with employers across industries like healthcare, finance, and entertainment constantly seeking skilled professionals. The field is incredibly versatile, as nearly every sector relies on technology experts. It's also exciting, offering opportunities to solve real-world problems and work on impactful projects. Whether you aspire to create the next big app, develop robots, or design smart systems, a career in tech provides endless opportunities for growth and making a difference.



New jobs are created. Old jobs disappear.



The digital skills gap in Malaysia is widening fast

Demand for digital-related positions in the Malaysia increased by 300%, waiting to be filled.

Malaysia has not been able to achieve the targeted 60% STEM students for the past 20 years

A Global Skills Report by Coursera last year ranked Malaysia in the **46th** spot, way behind Singapore (10th) and Vietnam (20th).



**Are you ready
for the future?**