



**#LEARNAI**

**Making artificial intelligence accessible to all**

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LearnAI Goes International



# READY TO DEMYSTIFY AI?

## Foreword

Artificial intelligence (AI) is one of the most important general-purpose technologies in this decade, and has become pervasive in almost all aspects of our lives. It also represents the next frontier in Singapore's Smart Nation journey.

By 2030, according to the National AI Strategy Singapore will be a leader in developing and deploying impactful AI solutions in key sectors of high value and relevance to our citizens and businesses. We have an opportunity to harness digital disruption and propel ourselves onto a new growth trajectory.

As the implementation of AI continues to accelerate on many fronts, we are scaling up AI literacy programmes nationwide and creating meaningful learning experiences to help our people master AI skills to meet the demands of our digital economy.

AI Singapore (AISG) has programmes pegged at different levels to cater to people from all walks of life, from children to working professionals. Academic qualifications are also being complemented with just-in-time training to help plug specific skill gaps.

We look forward to working with industry, non-profit organisations, the education sector and other agencies to scale AI literacy and proficiency in Singapore and make it accessible to all.

**Koo Seng Meng**

**Senior Deputy Director, AI Innovation**

### About AI Singapore (AISG)

AI Singapore (AISG) was established in June 2017 as a National Research and Innovation Programme Office focused on harnessing the scientific and economic potential of AI to boost Singapore's global competitiveness. We do this by directing AI research in areas of strategic interest, spearheading long-term development of national AI platforms; helping companies adopt and deploy AI in their core business practices; and building AI engineering talents and capabilities to catalyse industry transformation. AISG is funded by the National Research Foundation and hosted by the National University of Singapore.

For more information on AISG and our programmes,  
please visit [www.aisingapore.org](http://www.aisingapore.org).



# PROGRAMMES AT A GLANCE

To support Singapore's Smart Nation vision and its transformation into an AI-ready city state, one of AISG's key tasks is to groom local AI talent and develop generational AI capabilities in collaboration with public and private sector organisations. In line with this, we have rolled out our LearnAI initiative with flagship programmes catering to different learner profiles.

## Developing Generational AI Capabilities



Students (7 to 12 Years)	Students (Above 13 Years)	Working Professionals
<b>AI for Kids (AI4K)®</b> <ul style="list-style-type: none"> <li>● AI4K® Storybook 'Daisy and her AI friends'</li> <li>● AI4K® Online Learning Course (Beginner &amp; Intermediate)</li> </ul>	<b>Student Outreach Programme</b> <ul style="list-style-type: none"> <li>● AI4I® Literacy in AI certification</li> <li>● AI4I® Foundations in AI certification</li> <li>● Google Professional ML Engineer Certificate</li> <li>● Internship opportunities</li> </ul>	
	<b>AI for Everyone (AI4E)®</b> <ul style="list-style-type: none"> <li>● AI4E® Online Course</li> <li>● AI4K® Multilingual Edition</li> </ul>	
		<b>AI for Industry (AI4I)®</b> <ul style="list-style-type: none"> <li>● AI4I® Literacy in AI certification</li> <li>● AI4I® Foundations in AI certification</li> <li>● AI4I® Proficiency in AI certification</li> </ul>

I want my kids to be ready for the digital future, and AI will be an important part of it.

**How can I expose them to AI?**

# AI for Kids (AI4K)®

Give your children/pupils a digital headstart! Knowing what AI is and what it can and cannot do will go a long way in preparing them for the digital age and maybe even spark an interest in this exciting and promising field. The AI for Kids (AI4K)® programme, created for children between the ages of 7 and 12, consists of online learning programmes as well as a storybook where AI and other tech characters come to life.

## AI for Kids Storybook - Daisy and her AI Friends

When Daisy, a two-legged binary-speaking computer, finds herself lost on her first day in school, she gets help from other characters, each of whom teaches her a tech-related concept to help her find her way.

Aimed at lower primary pupils, the story of Daisy and her AI Friends introduces kids to basic AI concepts such as computer vision and machine learning in a fun and easy-to-understand way.

You can download a copy of the book [here](#).



Launch of 'Daisy and her AI Friends' Storybook by Minister of State for Education and Manpower, Ms Gan Siow Huang at Central Public Library (March'22).

## AI for Kids (AI4K)® Online Courses (Grade 1-4)

Learn to build simple AI applications from scratch, on Scratch.

The AI4K online courses expose kids to basic machine learning concepts such as supervised learning, computer vision and natural language processing in a fun and accessible way. They also learn to apply these concepts as they build applications using block coding. There are four grades to progress through, with the flexibility of learning at their own pace.

Click [here](#) to find out more about AI4K's online courses.





# AI for Kids (AI4K)® Partnerships

## META

Meta sponsored the first print run of Daisy and her AI Friends. The 15,000 copies were distributed to low-income families in an effort to provide equitable opportunities for everyone to learn about AI. The families are beneficiaries of various programmes run by the National Library Board, the Ministry of Social and Family Development, Touch Community Services, Singapore Hokkien Huay Kuan and other organisations. AISG looks forward to working with like-minded organisations and community partners to distribute the book to more beneficiaries.

## Singapore Hokkien Huay Kuan (SHHK)



Students from the Singapore Hokkien Huay Kuan's affiliated schools were introduced to AI4K as part of the association's Thinkers Programme, which seeks to develop their analytical and problem-solving skills and expose them to various areas of STEM (science, technology, engineering and math). AISG also conducted a two-day AI4K Certified Instructor Bootcamp to equip teachers with the knowledge and capabilities to conduct AI enrichment classes for their students.

## Yu Neng Primary School



We partnered Yu Neng Primary School to train teachers from its ICT department and students from the E-nnovation Club on the basic concepts of AI. The school went on to organise a virtual AI Festival, introducing these concepts to the wider student population and demonstrating how AI can be used to improve lives. In a session facilitated by students from the E-nnovation Club, participants were also equipped with the basic skills to build an AI application. Concurrently, AISG conducted an AI4E workshop for parents to find out more about AI. They even learnt how to build their own simple AI model with online tools without having to learn programming.

I am an AI newbie.

**Where do I begin my  
AI journey?**



# AI for Everyone (AI4E)®

You do not have to be an AI professional to understand what AI can do for you. Having some knowledge about AI and how it works will enable you to see how it can benefit you in your work or business, as well as your daily life.

## AI for Everyone (AI4E)®

AI for Everyone (AI4E)® is a foundational course that seeks to demystify AI and make you a more savvy consumer of AI products and services.

The four-hour programme introduces non-technical learners to modern AI technologies and applications, and teaches you how to identify opportunities and potential use cases in your work and daily life. You will also get hands-on practice in building a simple AI model using online tools.

As of November 2022, over 61,000 learners have completed the AI4E programme.

More information about AI4E can be found [here](#).



5 Lessons

Free

AI for Everyone (AI4E)®

[See more →](#)

## AI for Everyone (AI4E)® Multilingual Edition



AI4E is available not only in English but also in Chinese, Malay and Tamil as well. An abbreviated version of the programme was produced in each of the four official languages to reach out to the wider population and give them better access to learning about AI. The multilingual editions are available online. Organisations can also incorporate them into their own training courses, presentations, and activities.

## AI for Everyone (AI4E)® Partnerships

### Polytechnics and Institute of Technical Education

The AI4E curriculum is used as an AI Foundation Course by the polytechnics and Institute of Technical Education.

### Ministry of Education

AI4E is offered as a national AI course on the Ministry of Education's teaching and learning platform Student Learning Space.

### Civil Service College

AI4E is available as an AI course for all public service officers via the Civil Service College's portal [learn.gov.sg](#).

My friends and I are  
keen to learn more  
about AI.

**Where do we start?**

# AI Student Outreach Programme

The Student Outreach Programme seeks to promote AI literacy and proficiency among students from secondary schools, Integrated Programme schools, junior colleges, the Institute of Technical Education, polytechnics and universities.

It offers three levels of learning to suit different AI proficiencies. These can be completed via self-paced online learning, offering greater flexibility for full-time students. Each level leads to an industry-recognised certification for students to formalise their achievements and demonstrate to future employers their proficiency in AI.

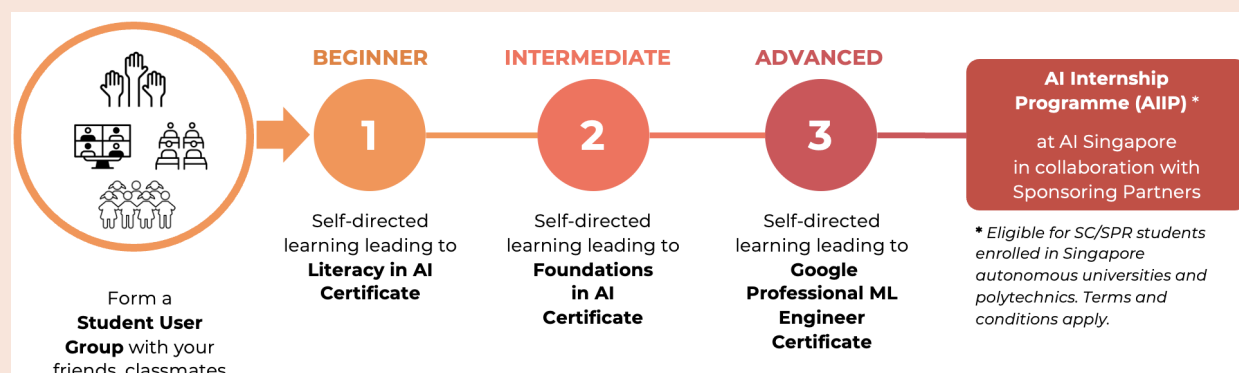
Supported by the Ministry of Education, the Student Outreach Programme aims to equip over 15,000 students with job-ready skills in STEM careers through AI skilling and internship opportunities.

## Just get started!

Interested? Just form a Student User Group (SUG) with at least 10 members from the same school or institution. You will be given access to AISG Community Groups as well as monthly Ask-Me-Anything sessions to support your learning, networking, and career development.

Go through each level of the curriculum with your group mates to pick up programming skills like Python and R, explore machine learning topics such as deep learning, and develop statistical thinking and critical thinking skills.

Internship opportunities are also available for those who wish to gain hands-on experience with real-world AI projects.



As of October 2022, over 90 SUGs have been formed with more than 2,100 student members. More information on the programme can be found at [here](#).



# AI Student Outreach Programme Partnerships

## Google

The Google Professional Machine Learning Engineer Certification will be awarded to 500 students every year who have successfully completed the Advanced level of the Student Outreach Programme.

## Centre for Strategic Infocomm Technologies

The Centre for Strategic Infocomm Technologies (CSIT) is the first partner to come on board the Student Outreach Programme to provide students with the opportunity to participate in three to six-month paid internships alongside AISG's engineers and apprentices, working on real-world industry projects.

There will be dedicated technical mentors under whom interns will learn to apply their know-how on practical challenges and be exposed to possible career opportunities in the defence science and technology sector.

## #SUGFamily

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This programme serves as a great opportunity for students to start their AI learning journey by teaching the basic concepts and scaling up to more advanced concepts as they become accustomed to AI. Furthermore, experienced students may be able to obtain more knowledge beyond what is taught in the school's typical curriculum.

**Chan Jian Sheng**  
Republic Polytechnic Student

**SUG: RP-SOI Group**

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The AI Student Outreach Programme serves as a platform for me and my SUG members to network with like-minded people, and to inspire and be inspired by others in the programme. The SUG creates an avenue for our members to keep each other in check and push one another to complete the next level in the programme. Most importantly, the programme gives many individuals the opportunity to step into the world of AI with guidance and support, regardless of their degree.

**Andrea Yap**  
Singapore Management University Student

**SUG: SMUAI**

# Student Outreach Activities

## AI-JIO! Series

AI-Jio is an extension of the AI Student Outreach Programme which aims to expose students to the latest trends in AI/machine learning (AI/ML) and provide an avenue for them to network with like-minded peers and industry experts. The inaugural AI-Jio event took place on 6 Oct 2022. It was organised by student leaders from AISG SUGs and interest groups from the Singapore University of Social Sciences, Singapore Management University and Nanyang Polytechnic, with the support of Google. Some 120 SUG members from various schools and institutions had fun learning from industry experts - Mr Koo Sengmeng (AISG) and Ms Galuh Sahid (Google Developer Expert in ML), as well as networking with peers from other SUGs at the Google Developers Space.



## National AI Student Challenge

The annual National AI Student Challenge brings together full-time students from local schools to identify real-world problems and come up with new and innovative uses of AI to solve them. Students may propose a solution in writing and/or by using AISG's AI Bricks to build natural language processing and computer vision applications. Through this event, we hope to nurture the critical and creative thinking skills needed to navigate and adapt to a changing world, and give students the opportunity to play an active role in shaping their own future using AI technology.

## AI Exploration Day

Take the AI Kahoot Quiz and Ask-Me-Anything! These were some of the activity highlights at the first AI Exploration Day organised by AISG and ITE College Central School of Business & Services. More than 300 participants took part in the event which was held on 22 July 2022 at the ITE illuminITE Theatre. The Ask-Me-Anything panel featured speakers from EY, DBS Bank, AISG and the session was moderated by student leaders from ITE and Singapore Polytechnic.



I know AI has  
potential but I am  
not exactly sure

**how can my  
organisation  
embark on our AI  
learning journey?**



# AI for Industry (AI4I)®

AI for Industry (AI4I)® is a set of progressive professional development courses for working adults and students with basic to intermediate knowledge of AI. Get down to the bottom of pesky myths about AI with a fundamental understanding of what AI, Machine Learning and AI Ethics is. AI4I also provides a structured learning pathway for learners to progress to AISG's AI Apprenticeship Programme (AIAP), a nine-month full-time structured training programme where apprentices get to work on industry projects and deepen their skills. The AI4I courses, in particular Foundations in AI and Proficiency in AI, also prepare candidates to take the technical test for the AI Professionals Association's Associate AI Engineer certification.

Course	Literacy in AI (Free)	Foundations in AI * (Premium)	Proficiency in AI (Free)
<b>Duration</b>	5 Hours	140 Hours	110 Hours
<b>Overview</b>	Get introduced to the world of machine learning and explore the topic of ethics in AI. Learn about modern AI applications and build simple AI models with online tools. Suitable for learners with <b>basic to intermediate</b> knowledge of AI.	Dive deeper into AI and acquire new skills and domain knowledge. Learn the proper concepts and knowledge for creating and deploying AI models in Python. Suitable for learners with <b>intermediate</b> knowledge of AI.	Learn advanced concepts for creating better AI models in Python. This course will prepare you for the Chartered AI Engineer (CAIE) Associate technical test. Suitable for learners with <b>in-intermediate</b> knowledge of AI.
<b>Prerequisites</b>	It is recommended that you complete the <b>AI for Everyone</b> programme before embarking on this.	Learners are required to complete the <b>Literacy in AI</b> programme.	Learners are required to complete <b>Foundations in AI</b> .
<b>Outcomes</b>	Upon successful completion of the course, you will receive the <b>Literacy in AI</b> certificate.	Upon successful completion of the course, you will receive the <b>Foundations in AI</b> certificate.	Upon successful completion of the course, you will receive the <b>Proficiency in AI</b> certificate.

\* A fee is payable for the Foundations in AI course which comes with a 12-month DataCamp Premium account. For more information on the course content, visit [here](#).

## #LearnAIStories

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After taking on Literacy in AI adult learner Jacky Tan, who had no prior experience in tech or coding was encouraged to embark on his further learning and pursue a Masters in Intelligent Systems at NUS. Find out his story [here](#)!

Curious about AI and the various use cases that can be applied at work, Lorraine Ong a public servant at GovTech, embarked on AI4I. Check out her story [here](#)!

# AI for Industry (AI4I)®

## AI Readiness Index

It is a common misconception that AI adoption is only suitable for larger or technology-based organisations. The reality is that smaller companies across different sectors can also adopt ready-made AI solutions for their core or peripheral business activities, even if they are lacking in data, talent, or a machine learning infrastructure. Organisations should assess their current AI capabilities and determine whether these are aligned with their business objectives. This can be done through the AI Readiness Index (AIRI), an industry-focused AI readiness assessment framework developed by AISG. Find out more about AIRI [here](#) and embark on your organisation's AI journey.

## Corporate Membership

The AISG Corporate Membership Plan gives companies access to AISG's learning platform and AI-Ready Clinics as well as AI experts to help select the best AI pathway to move up the AI Readiness Index (AIRI). Companies can also participate in AISG's flagship 100 Experiments Programme (100E) and overcome the AI talent shortage with our AI Apprenticeship Programme. For more information, visit [here](#).

Tiers	Bronze Plan	Silver Plan	Gold Plan
Cost	\$2,500 (prevailing GST applies)	\$4,500 (prevailing GST applies)	Get A Quote
Benefits	<ul style="list-style-type: none"> <li>● 12-month access to Foundations in AI course for up to 10 learners</li> <li>● 12-month access to Datacamp Premium</li> <li>● LearnAI Group Learning Dashboard</li> <li>● Priority access to AI-Ready Clinic</li> <li>● AI Learning Day for your organisation (up to 50 pax)</li> </ul>	<ul style="list-style-type: none"> <li>● 12-month access to Foundations in AI course for up to 25 learners</li> <li>● 12-month access to Datacamp Premium</li> <li>● LearnAI Group Learning Dashboard</li> <li>● Priority access to AI-Ready Clinic</li> <li>● AI Learning Day for your organisation (up to 100 pax)</li> </ul>	<ul style="list-style-type: none"> <li>● 12-month access to Foundations in AI course for more than 25 learners</li> <li>● 12-month access to Datacamp Premium</li> <li>● LearnAI Group Learning Dashboard</li> <li>● Priority access to AI-Ready Clinic</li> <li>● AI Learning Day for your organisation (to enquire)</li> </ul>

## Corporate Partnership

AISG is keen to work with like-minded companies, organisations and industry associations to develop AI learning opportunities for working professionals through programmes such as AI Learning Day and Literacy in AI workshops, and to list AISG's e-learning courses on your learning and development portal. If you are looking to scale baseline AI literacy and proficiency across your organisation or industry, reach out to us [here](#).

I have AI  
proficiency.

**How can I get  
companies to  
recognise my  
skills?**

# Chartered AI Engineer Certification

In the absence of a global standard for qualifying AI skills and competencies, AISG has stepped up to the plate to introduce Singapore's first professional qualification framework for AI engineers.

The framework comprises four levels of qualification – Associate AI Engineer and Chartered AI Engineer Levels 1 to 3. This enables companies to ascertain the calibre of the talents they are hiring. At the same time, it helps meet the growing demand for skilled AI engineers by providing a structured pathway for the professional development of students and working professionals who are keen to pursue a career in AI.

To scale this effort, the AI Professionals Association (AIP) was registered by AISG and our industry partners in July 2020 to professionalise and catalyse industry recognition and adoption of the Chartered AI Engineer certification. This involves defining clear roles and responsibilities for AI engineers and practitioners, establishing the required level of education and training, and defining processes for developing and maintaining AI systems in production.

Today, AIP runs the Chartered AI Engineer™ (CAIE) professional qualification programme. Working professionals and students in Singapore can apply for the Associate AI Engineer certification and CAIE Level 1 and Level 2.

CAIE Level 3 is awarded based on industry nomination and will be evaluated by AIP on a case-by-case basis.

As the demand for skilled AI engineers grows, CAIEs are well positioned to provide the necessary technical and professional knowledge, skills and competencies to manage AI projects successfully from start to end.

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Companies don't really know how to qualify or quantify AI skills today. The certification is for AI engineers to show they have the skills and the ability to scale AI projects in a real-world environment.

**Laurence Liew, Director of AI Innovation**

# Chartered AI Engineer Certification

Qualification	Profile	Required Competencies
<b>Associate AI Engineer</b>	Students or working professionals who have the necessary technical skills and knowledge to start working on an AI project for a business organisation that has some data capabilities.	<ul style="list-style-type: none"> <li>● Programming proficiency</li> <li>● Exploratory data analysis</li> <li>● Data preparation</li> <li>● Model design and development</li> <li>● Machine learning (ML) pipeline setup</li> </ul>
<b>Chartered AI Engineer™ Level 1</b>	Working professionals who have the necessary technical skills to develop AI solutions. They are able to draw a relationship between an AI project and its relevance to business and design a solution to meet the deliverables.	<ul style="list-style-type: none"> <li>● Project management</li> <li>● Exploratory data analysis</li> <li>● Data preparation</li> <li>● Model design and development</li> <li>● Model deployment</li> <li>● AI governance</li> </ul>
<b>Chartered AI Engineer™ Level 2</b>	Practising AI professionals who are team leads for AI engineers and also manage internal and external stakeholders. They are able to align project outcomes with business goals and set up appropriate processes to monitor the effectiveness of AI models that have been deployed. They also lead or are involved in the final solution architecture to ensure that the deployment is successful and delivers business value.	<ul style="list-style-type: none"> <li>● Project and team leadership</li> <li>● Solution design and development</li> <li>● Model deployment workflow</li> <li>● ML operations</li> <li>● AI governance</li> <li>● Business communication</li> </ul>
<b>Chartered AI Engineer™ Level 3</b>	Accomplished AI professionals with at least six years of experience in AI-related roles, who have overseen the development and deployment of multiple complex large-scale AI projects in an organisation. They are able to architect the organisation's infrastructure to incorporate AI solutions into the business.	<ul style="list-style-type: none"> <li>● AI enterprise architecture</li> <li>● IP management</li> <li>● Strategy formulation</li> <li>● Thought leadership</li> <li>● AI governance</li> </ul>

For more information on AIP and its programmes, please visit [aip.org.sg](http://aip.org.sg).

# LEARNAI GOES INTERNATIONAL

AISG's LearnAI initiative is garnering international attention, with Egypt being the first country to sign a cooperation agreement in July 2021 to implement two of our talent development programmes – the AI Apprenticeship Programme (AIAP) and AI for Everyone (AI4E)®.

The collaboration between AISG and Egypt's Ministry of Communications and Information Technology is aimed at helping the country to launch capacity-building programmes to boost its AI capabilities.

Under the first thrust of the collaboration, AISG will train a newly-formed 10-member core Egyptian team on how to implement and run AISG's award-winning\* AIAP. second thrust of the collaboration will involve translating the AI4E into standard Arabic for nationwide promotion.



*The virtual signing ceremony for the cooperation agreement was witnessed by Singapore's Minister for Communications and Information and Minister in Charge of Smart Nation and Cybersecurity Mrs Josephine Teo and Egypt's Minister of Communications and Information Technology, H.E. Dr Amr S. Talaat.*

\*Winner in the "Talent Accelerator" category of the 2019 IDC Digital Transformation Awards.



# ARE YOU READY TO BEGIN?



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