

PERANTIS MySTEP AI Programmer

1st July – 31st December 2022

A Malaysia short-term employment programme supporting the Malaysian Government's initiative to revive the economy via human capital development





Foreword

Perantis MySTEP is a Malaysia short-term employment programme supporting the Malaysian government initiative to revive the economy via human capital development

KOTO Association is an Artificial Intelligence-driven platform for Upskilling, Job Matching and Financial Inclusion. KOTO Association is honoured to be designated as the Authorized Training Partner (ATP) for this programme.

The outcome of the training programme is to enhance Iskandar Malaysia's regional economic development via human capital development, produce competent talent for employment and address the unemployment issues caused by the pandemic Covid-19.

To actualize this initiative, Perantis Iskandar has commissioned its Authorized Industry Partner (AIP), Imagine AI Sdn. Bhd., to train trainees on practicing their knowledge during industrial training.

KOTO Association will deliver a 1-month classroom training in different categories as stated below, followed by 5 months of industrial training after which the trainees may begin full-time employment at Imagine AI Sdn. Bhd based on their performance during the programme.

It is a pleasure to welcome all the trainees to this programme. Do take advantage of the good opportunity to kick-start your career with a better foundation.

Appreciation goes to Perantis Iskandar and the Malaysian Government for this initiative and the opportunity to be the Authorized Training Partner (ATP).

Thank you.
Steve Edwards

COURSE DATE 2022

Data Engineering 4th July – 8th July

- Intro to Data Engineering
- Intro to Hadoop Ecosystem (Hadoop DFS, Spark, Kafka, HBase)
- Case Study for Hadoop
- Database in SQL/noSQL in DE
- ETL Pipeline

Artificial Intelligence 18th July – 22nd July

- AI Nature & Problem Definition
- Uninformed/ Informed Search
- Ontology, Classification, Semantic Network
- Python – Lecture Slide
- Natural Language Processing

Data Science 11th July – 15th July

- Introduction to Data Science
- Data Science Process
- Visualization and Descriptive Analysis
- Mining Data Streams
- Case Study

Machine Learning 25th July – 29th July

- Supervised Learning
- Unsupervised Learning
- Neural Network
- Image Processing and Computer Vision

Data Engineering

Date: 4th July – 8th July 2022

Trainer:
Prof Dr Lim Tong Ming

Mr. Tan Zi Xuan

Course Description

Data Engineering or Information Engineering is a software approach to develop information. Good data engineering skills help data engineers to optimize data of a company towards usability. Trainees will learn about the Fundamentals of Data Engineering, Fundamentals of Hadoop Systems, Database in SQL/noSQL in Data Engineering and ETL Pipeline. With this course, trainees will have better understanding of data engineering and able to solve the problem of data storage.

Course Schedule

Day & Date	Mode	Time	Activities	Trainers
Monday 4 th July 2022	Physical Lesson (The Xpress Train)	9:00 AM – 4:00 PM	Lecture, Exercise	Mr. Tan Zi Xuan
Tuesday 5 th July 2022				
Wednesday 6 th July 2022	Hybrid (Google Meet)	10:00 AM - 4:00 PM	Online Lecture (2 hours), Exercise (4 hours)	Prof Dr. Lim Tong Ming
Thursday 7 th July 2022				
Friday 8 th July 2022	Google Chat	Subject to each trainer	Assignment	
Saturday 9 th July 2022	Rest			
Sunday 10 th July 2022				

Data Science

Date: 11th July – 15th July 2022

Trainer:
Dr Sean Tan Chi Wee

Course Description

Data Science frequently used to make the decisions or predictions of predictive causal analytics, prescriptive analytics, and machine learning. Data Science is the future of Artificial Intelligence as it can help on processing the data. During this Data Science course, trainees will learn about the Fundamentals of Data Science, Data Science Process, Visualization and Descriptive Analysis, and Mining Data Streams. The case study will be given to trainees to allowed them to have more deeper understanding of data science.

Course Schedule

Day & Date	Mode	Time	Activities	Trainer
Monday 11 th July 2022	Physical Lesson (The Xpress Train)	9:00 AM – 4:00 PM	Lecture, Exercise	Dr. Sean Tan Chi Wee
Tuesday 12 th July 2022				
Wednesday 13 th July 2022	Hybrid (Google Meet)	10:00 AM - 4:00 PM	Online Lecture (2 hours), Exercise (4 hours)	
Thursday 14 th July 2022				
Friday 15 th July 2022	Google Chat	Subject to each trainer	Assignment	
Saturday 16 th July 2022	Rest			
Sunday 17 th July 2022				

Artificial Intelligence

Date: 18th July – 22nd July 2022

Trainer:

Dr. Sean Tan Chi Wee

Course Description

This Artificial Intelligence course allowed the trainees to know how they can use advanced Mathematics, Computer Science, and Engineering to create a system or a machine. In today's world, Artificial Intelligence acts as the main driver of emerging technologies. So, the knowledge of Artificial Intelligence can increase the value of trainees who would like to work in this industry in the future. AI Nature and Problem Definition, Uninformed or Informed Search, Ontology, Classification, Semantic Network, Python, Natural Language Processing are the contents that will be teach by trainer in this course.

Course Schedule

Day & Date	Mode	Time	Activities	Trainer
Monday 18 th July 2022	Physical Lesson (The Xpress Train)	9:00 AM – 4:00 PM	Lecture, Exercise	Dr. Sean Tan Chi Wee
Tuesday 19 th July 2022				
Wednesday 20 th July 2022	Hybrid (Google Meet)	10:00 AM - 4:00 PM	Online Lecture (2 hours), Exercise (4 hours)	
Thursday 21 st July 2022				
Friday 22 nd July 2022	Google Chat	Subject to each trainer	Assignment	
Saturday 23 rd July 2022	Rest			
Sunday 24 th July 2022				

Machine Learning

Date: 25th July – 26th July 2022

Trainer:

Assoc Prof Ts. Dr. Tew Yiqi

Course Description

Machine Learning is a must-have skill for data analyst, and AI programmer. It helps data analyst to transform all the unprocessed data into accurate trends and forecasts. Through this course, trainees will learn and practice the machine learning skills. Supervised Learning, Unsupervised Learning, Neural Network, Image Processing and Computer Vision are the content that will be teach by trainer in this course.

Course Schedule

Day & Date	Mode	Time	Activities	Trainer
Monday 25 th July 2022	Physical Lesson (The Xpress Train)	9:00 AM – 4:00 PM	Lecture, Exercise	Assoc Prof Ts. Dr. Tew Yiqi
Tuesday 26 th July 2022				
Wednesday 27 th July 2022	Hybrid (Google Meet)	10:00 AM - 4:00 PM	Online Lecture (2 hours), Exercise (4 hours)	
Thursday 28 th July 2022				
Friday 29 th July 2022	Google Chat	Subject to each trainer	Assignment	
Saturday 30 th July 2022	Rest			
Sunday 31 st July 2022				

TRAINERS



Prof Dr Lim Tong Ming

Prof. Dr Lim Tong Ming is the director of Centre for Business Incubation and Entrepreneurial Ventures (CBIEV), Tunku Abdul Rahman University College (TARC), Malaysia. He has 10 years experiences of commercial software and almost 20 years of academic experience. He is a researcher that focused the areas from object technologies on software engineering to databases, peer to peer technologies, knowledge sharing to social media analytics and social influence maximization. He is also a professional ACM member and a society affiliate member of IEEE Association.



Assoc Prof Ts Dr Tew Yiqi

Assoc Prof Ts Dr Tew Yiqi is a senior lecturer from the Faculty of Computing & Information Technology (FOCS), Tunku Abdul Rahman University College (TARC), Malaysia. He has more than 10 years experiences of working in the higher education and smart home industry. He is a lead researcher in Computational Intelligence with publication more than 30 papers including ISI Tier 1 papers. He also engaged the industrial projects on Industry 4.0, Data Channeling work on Smart Manufacturing, Smart Agricultural health status monitoring and Smart Campus initiatives.



Dr Sean Tan Chi Wee

Dr Sean Tan Chi Wee is an enthusiastic researcher in conducting and supporting research into Image Processing. He has more than 10 years of education and hands-on experience in teaching. He is also adaptive team player with expertise in data collection, confidential document control and problem-solving to complete projects on time.



Mr. Tan Zi Xuan

Mr. Tan Zi Xuan is a master's student at Tunku Abdul Rahman University College (TARC), Malaysia. He has a strong background in computer science such as programming, database, data science, and tools/ software. He has work experience on administer and managing the TARUC Hadoop Cluster.