NANYANG
THE INNOVATIVE POLYTECHNIC

Introduction to AI and Machine Learning

School of Engineering
Nanyang Polytechnic

Synopsis

This course introduces learners to Artificial Intelligence (AI), Machine Learning (ML), and Deep Learning (DL) fundamentals and how AI and ML may help to address various business needs. The types and techniques of ML and the ML modeling process will also be covered. Use cases and activities will be introduced to enhance thinking capabilities, and practical sessions will be conducted for learners to implement ML solutions.

Learning Outcomes

At the end of this course, learners will be able to:

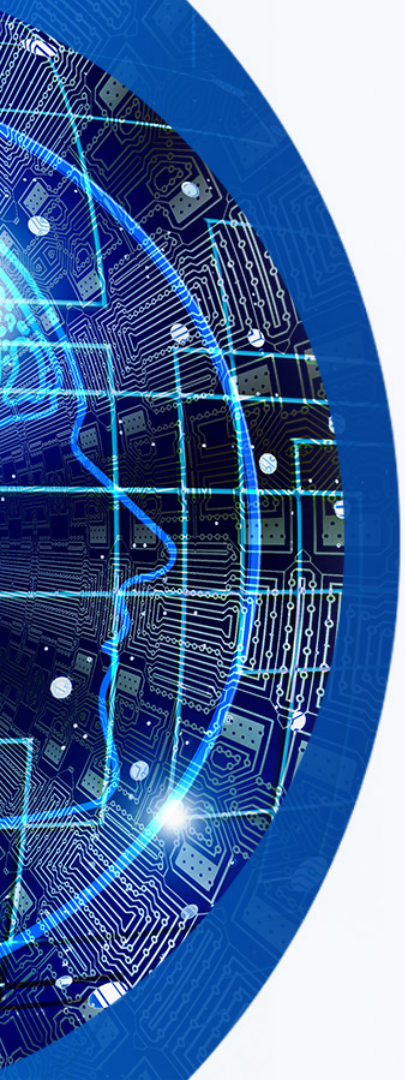
1. Understand the basics of AI, ML, and DL
2. Know the ML types and techniques and understand how they work
3. Appreciate the applications of AI/ML in addressing various business needs

Topics

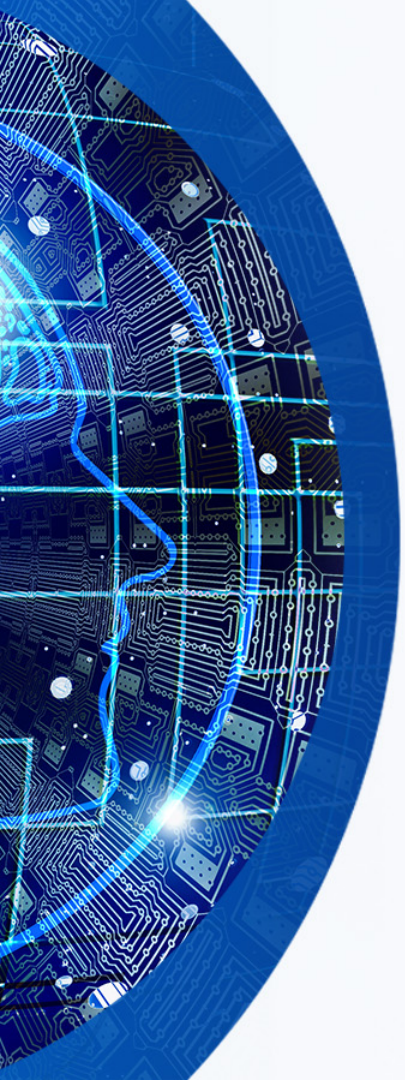
1. Overview of AI, ML, and DL
2. Machine Learning Types and Techniques
3. Machine Learning Modeling Process

Activities:

- Creating an Object Recognition Model
- Linear Regression using Excel
- Business Problem and Formulation in ML



Time	Programme
0900 - 1030	**1. Overview of AI and machine learning** 1.1. What is Artificial Intelligence (AI) 1.2. What is Machine Learning (ML) 1.3. What is Deep Learning (DL)
1030 – 1045	**Tea/Coffee Break**
1045 – 1230	**Activity**: Creating an Object Recognition Model **2. Machine Learning Types and Techniques** 2.1. Supervised, Unsupervised, and Reinforcement Learning 2.2. Classification 2.3. Regression
1230 – 1330	**Lunch**
1330 – 1500	2.4 Clustering 2.5 Artificial Neural Networks **Activity**: Linear Regression using Excel
1500 – 1515	**Tea/Coffee Break**
1515 – 1630	**3. Machine learning modeling process** 3.1. The Machine Learning Pipeline 3.2. Use Case and Applications **Activity**: Business Problem and Formulation
1630 – 1700	Conclusion and Q&A session



URL: https://tinyurl.com/y539njyf

Course code: CE1540-220001

Course Title: **INTRODUCTION TO AI AND MACHINE LEARNING (ONLINE) (CE1540-220001)**

Course Start Date: 4-Aug-2022

Name of Trainer(s): Dr Foo Yong Wee

Congratulations on your successful course completion! As part of the requirements from the funding agency, you can expect to receive emails from SkillsFuture Singapore asking for your participation in their short surveys – the Quality Survey (at the end of this course) and Outcome Survey (6 months after the end of course).

So look out for emails from SkillsFuture Singapore which will be similar the one shown below:

From: "noreply@traqom.azcentric.com" <noreply@traqom.azcentric.com>
To:
Cc:
Sent:
Subject: Invitation from SkillsFuture Singapore to Participate in TRAQOM Quality Survey

SKILLSfuture SG

Dear **XXXX**

SkillsFuture Singapore (SSG) would like to invite you to participate in a quality course survey as you have completed training for **[Course Title]** with course ID (**ABCD**) on **DD/MM/YYYY**.

2. We have appointed Azaas Pte Ltd to conduct the survey. It should take about 10 minutes or less. Please click on link below to access the survey. You can also copy the URL below and paste it on an ir
https://traqom.azcentric.com/s-LgV1

3. Your survey responses will be aggregated and published on MySkillsFuture. This will help other learners make informed decisions when selecting courses for training and help training providers impr
protected under the Personal Data Protection Act.

End

Class Introduction

1. Name and Dept
2. Current role/responsibility
3. Experience in data analytics and machine learning
4. Expectation for the course

Trainer

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