Artificial Intelligence (AI) Foundation and Intermediate

Program Overview

Introduction to Artificial Intelligence course is designed to help learners decode the mystery of artificial intelligence and its business applications.

The course provides an overview of AI concepts and workflows, machine learning and deep learning, and performance metrics. You'll learn the difference between supervised, unsupervised and reinforcement learning; be exposed to use cases, and see how clustering and classification algorithms help identify AI business applications.

Objective

Candidates can expect to gain knowledge and understanding in the following upon successful completion of the education and examination components related to this certification.

- The meaning, purpose, scope, stages, applications, and effects of AI Fundamental concepts of machine learning and deep learning
- The difference between supervised, semi-supervised and unsupervised learning Machine Learning workflow and how to implement the steps effectively
- The role of performance metrics and how to identify their key methods
- Able to fully grasp the difference between AI, ML , BIG DATA and also how they are all interconnected
- Able to learn and draft AI algorithms
- Able to do a simple demo on chat-bot
- Able to understand the business problem and link it up to AI as well as Big data. How can these elements influence business

Target Audience:

- Developers aspiring to be an artificial intelligence engineer or machine learning engineer
- Analytics managers who are leading a team of analysts
- Information architects who want to gain expertise in AI algorithms
- Analytics professionals who want to work in machine learning or artificial intelligence
- Graduates looking to build a career in artificial intelligence or machine learning

Workshop Chronology

3 days training
9am – 5pm

Exam

- Exam will be on Day 3 for 1 hour (Closed Book)
- There is 40 Multiple Choice Questions
- 65% is the Passing rate

DECODE THE FUNDAMENTALS & WORKFLOW OF AI & MACHINE LEARNING

CCSD COUNCIL
ISO 9001:2015 certified company

CCSD
CONVERGENCE CERTIFICATION AND SKILL DEVELOPMENT COUNCIL

SHIEH MANAGEMENT

PSMB STAR RATING
TOP 5-STAR
TRAINING PROVIDER

HRDF
-MALAYSIA-

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Workshop Outline

DAY 1
Decoding Artificial Intelligence
- Meaning, Scope, and Stages Of Artificial Intelligence
- Three Stages of Artificial Intelligence
- Applications of Artificial Intelligence
- Image Recognition
- Applications of Artificial Intelligence - Examples
- Effects of Artificial Intelligence on Society
- Supervises Learning for Telemedicine
- Solves Complex Social Problems
- Benefits Multiple Industries
- Key Takeaways
- Knowledge Check

Fundamentals of Machine Learning and Deep Learning
- Meaning of Machine Learning
- Relationship between Machine Learning and Statistical Analysis
- Process of Machine Learning
- Types of Machine Learning
- Meaning of Unsupervised Learning
- Meaning of Semi-supervised Learning Algorithms of Machine Learning
- Regression
- Naive Bayes
- Naive Bayes Classification
- Machine Learning Algorithms
- Deep Learning
- Artificial Neural Network Definition

- Definition of Perceptron
- Online and Batch Learning
- Key Takeaways
- Knowledge Check

Machine Learning Workflow
- Learning Objective
- Machine Learning Workflow Get more data
- Ask a Sharp Question Add Data to the Table Check for Quality Transform Features Answer the Questions Use the Answer
- Key takeaways Knowledge Check

DAY 2
Performance Metrics
- Understanding Performance Metrics
- Need For Performance Metrics
- Key Methods Of Performance Metrics Confusion Matrix Example
- Terms Of Confusion Matrix Minimize False Cases
- Minimize False Positive Example Accuracy
- Precision
- Recall Or Sensitivity Specificity
- F1 Score
- Key takeaways Knowledge Check
- Chat-bot Essentials
- What are frameworks to apply on building a chat-bot
- What are the do's and dont's in enhancing the chat-bot
- Machine Learning with Phyton using Scikit-learn(formerly scikits.learn)
- Machine Learning Approach

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Workshop Outline

DAY 3
The Application of AI
- Steps 1 and 2
- Steps 3 and 4
- How it Works
- Steps 5 and 6
- Assignment 01
- Demo Assignment 01
- Supervised Learning Model Considerations
- Knowledge Check
- Scikit-Learn
- Knowledge Check
- Key Takeways into Case Study
- How Big Data combines with AI to provide smart recommendations
- Supervised Learning Models - Logistic Regression
- Unsupervised Learning Models
- Pipeline
- Model Persistence and Evaluation
- Knowledge Check
- Natural Language processing with Scikit Learn
- NLP Overview
- NLP Applications
- Knowledge check
- Scenario Based Examination

Exam Revision
Final Examination

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Trainer Profile

Vigneswaren Krishnamoorthy

•Big Data Solutions • Analytics and Visualization • Machine Learning and Artificial Intelligence • Graph Database Solutions • Be-Spoke Software Solutions • Training and Consulting

Vigneswaren has been involved in software development for the past 24 years, from a junior developer, researcher till a Senior member of management in a multinational. He still maintains an active continuous learning practice picking up the latest technologies and applying them to solve problems in the industry. As a continuous learning advocate he encourages the staff and people around him to pick up new skills to be competitive in the industry.

He has successfully delivered large scale project implemented globally and locally including HRDF eTRIS as a key member to formulate transformation of their online services. His other projects have been in various other spaces including government, medical, telecommunications and finance. As part of the projects in recent times he has implemented cutting edge technologies that cover big data mining, analytics, machine learning and AI in the solutions.

He has provided trainings across the range from user software training to technical trainings including Big Data, Machine Learning and AI, Graph Database and Mind Mapping essentials. As a Solution Architect he works closely with clients to define scope and develops strategy to deliver on the requirements of the projects with development and deliver teams of the organization.

He currently provides consulting and training for companies who are looking to improve their software development practices and technology stack implementation and is actively involved in forums for technology and workforce improvement.