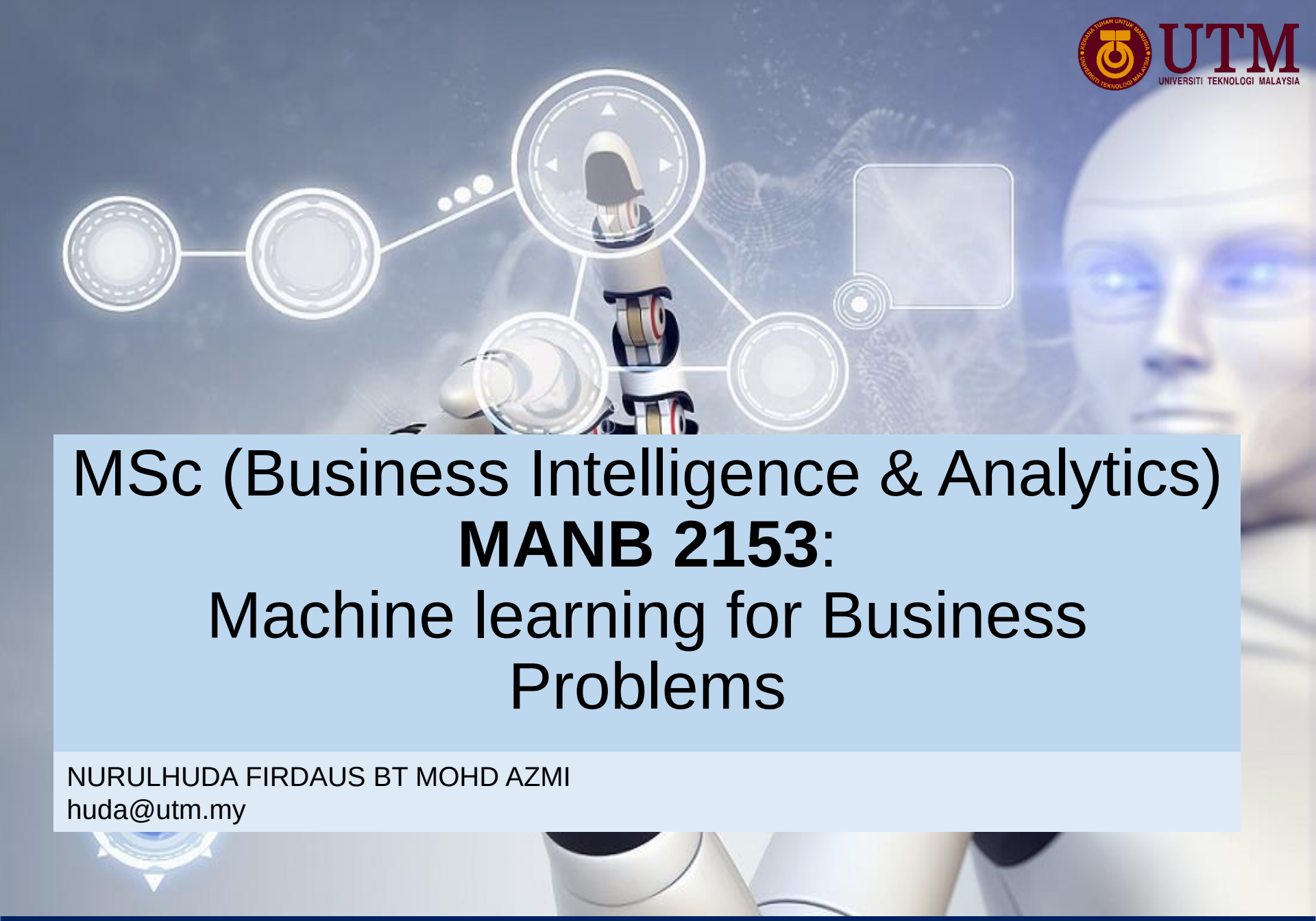

MSc (Business Intelligence & Analytics)
MANB 2153:
Machine learning for Business Problems

NURULHUDA FIRDAUS BT MOHD AZMI
huda@utm.my

Outline

- Instructor' Profile
- Course Synopsis and Outline
- Assessments
- Class Policy
  - Assignment/ Labs/Projects/Test/Case Study
  - Attendance
  - E-Learning Activities
  - EPPP

Instructor's Profile

- Dr. Nurulhuda Firdaus Bt Mohd Azmi (Huda)
- Senior Lecturer
- Member of Operational Business Intelligence (OBI) Research Group
- Member of Machine Learning for Data Science (MLDS Special Interest Group)
- Research Interest:
  - Data Modeling and Analytics, Operational Research, Machine learning, Soft Computing, Big Data Analytics, Data Integration

– Email : huda@utm.my

– Room No : Level 7, MJIIT

Course Synopsis

- This course covers the key elements of computational intelligence and how the computational intelligence fits into the larger picture comprising machine intelligence (the machine learning) and biological intelligence.
- The course will cover the issues related to the basic knowledge about the key algorithms and theory that form the foundation of machine learning and computational intelligence:
  - Addressing the question on how to enable computers to learn from past experiences,
  - Introduces the field of machine learning describing a variety of learning paradigms, algorithms, theoretical results and applications covered the computational intelligence for instance reinforcement learning, instance based learning, bio inspired learning and etc.

Course Synopsis

- Students are able to understanding the principles of machine learning and the computational intelligence including its advantages, limitations and possible applications.
- Students will be able to identify and apply the appropriate machine learning and computational intelligence techniques to solve classification, pattern recognition, optimizations and decision in Business problems.

Course Outline

Day/Week	Topic
1	Machine Learning and Computational Intelligence: The Basic Foundation Lab: Introduction to Python
2	Types of Errors, Cross Validation, Main Types of ML Models: Generative, Instance Based, Discriminative Naïve Bayes, KNN Decision Tree Lab: Data Selection
3	Artificial Network Computation: Artificial Neural Networks
4	Evolutionary Computation: Genetic Algorithm Support Vector Machine
5	Performance Measurements and Validation
6	Special Topics

Assessment

GRADING				
No	Assessment	Quantity	% Each	%Total
1	Seminar Paper	1	20	20
2	Quiz	1	10	10
3	Assignment	3	20	20
4	Project	1	30	30
5	Presentation			10

Reference

- Coursera (Stanford University) Machine Learning:
- https://www.coursera.org/learn/machine-learning
- MIT Open Courseware on machine learning: https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-867-machine-learning-fall-2006/
- Books:
- Christopher M. Bishop, Pattern Recognition and Machine Learning (Information Science and Statistics), Springer; 1st ed. 2006. Corr. 2nd printing edition (October 1, 2007), ISBN-10: 0387310738, ISBN-13: 978-0387310732
- Ethem Alpaydin. Introduction to Machine Learning (Adaptive Computation and Machine Learning series). The MIT Press; second edition edition (December 4, 2009. ISBN-10: 026201243X, ISBN-13: 978-0262012430

Class Policy

- Assignment/Labs/Projects
  - Any late submissions will be penalized 1% of each a day late
- Attendance
  - Class is held at 9.00 am. Attendance is compulsory.
  - Absence will be penalized, unless early notifications
- E-Learning Activities
  - Required activities for assessment.

Thank you☺