MACHINE LEARNING, ML

PROF. CARL GUSTAF JANSSON
School of Electrical Engineering and Computer Science
KTH, The Royal Institute Of Technology

TYPE OF COURSE : Rerun | Elective | PG
COURSE DURATION : 8 weeks (21 Feb' 22 - 15 Apr' 22)
EXAM DATE : 24 Apr 2022

PRE-REQUISITES : Relevant applied math and statistics, core computer science

INTENDED AUDIENCE : Interested students

INDUSTRIES APPLICABLE TO : Broad industrial interest at present, i.e. for autonomous vehicles, robots, intelligent assistants and general datamining

COURSE OUTLINE :

The scientific discipline of Machine Learning focuses on developing algorithms to find patterns or make predictions from empirical data. It is a classical sub-discipline within Artificial Intelligence (AI). The discipline is increasingly used by many professions and industries to optimize processes and implement adaptive systems. The course places machine learning in its context within AI and gives an introduction to the most important core techniques such as decision tree based inductive learning, inductive logic programming, reinforcement learning and deep learning through decision trees.

ABOUT INSTRUCTOR :

Prof. Carl Gustaf Jansson is tenured Professor in Artificial Intelligence at the School of Electrical Engineering and Computer Science, KTH Royal Institute of Technology, Stockholm, Sweden. His research contributions are mostly in artificial intelligence, in particular Knowledge Representation and Machine Learning. Particular research interests are intelligent interfaces and ubiquitous computing.

COURSE PLAN :

Week 1: Introduction to the Machine Learning course

Week 2: Characterization of Learning Problems

Week 3: Forms of Representation

Week 4: Inductive Learning based on Symbolic Representations and Weak Theories

Week 5: Learning enabled by Prior Theories

Week 6: Machine Learning based Artificial Neural Networks

Week 7: Tools and Resources + Cognitive Science influences

Week 8: Examples, demos and exam preparations

PRINCIPAL
G. Narayanamma Institute of
Technology & Science (for women)
(AUTONOMOUS)
Shaikpet, Hyderabad - 500 104

Roll No:NPTEL19CS35S51451731

To CHILUPURI ANUSHA
G. NARAYANAMMA INSTITUTE OF TECHNOLOGY
AND SCIENCE (FOR WOMEN)
HYDERABAD

742

No. of weeks of NPTEL Courses	Equivalence of NPTEL course with regular FDP
4	$\frac{1}{2}$ FDP of one week
8	Full FDP of one week
12	$1\frac{1}{2}$ FDP

Duration of NPTEL course: 8 Weeks

NPTEL-AICTE
Faculty Development Programme

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

CHILUPURI ANUSHA

for successfully completing the course

Machine Learning, ML

with a consolidated score of **65** %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Feb-Apr 2019)

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Prof. Dileep N. Malkhede
Advisor-I (Research, Institute & Faculty Development)
All India Council for Technical Education

Roll No: NPTEL19CS35S51451731

To validate and check scores: http://nptel.ac.in/noc

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams.
This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2018, similar to other refresher / orientation courses.
F.No. AICTE / RIFD / FDP through MOOCs / 2017-18

G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women)
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Shaikpet, Hyderabad – 500104

Department: Electronics and Communication Engineering

2018-19

REPORT

FDP on Machine Learning, ML

Date of program: 21-02-2019 to 15-04-2019

Resource person: Prof. Carl Gustaf Jansson

Carl Gustaf Jansson is tenured Professor in Artificial Intelligence at the School of Electrical Engineering and Computer Science, KTH Royal Institute of Technology, Stockholm, Sweden. His research contributions are mostly in artificial intelligence, in particular Knowledge Representation and Machine Learning. Research interests are intelligent interfaces and ubiquitous computing.

About the Program:

The program covers a wide range of topics, including:

- Foundations of Machine Learning: Introduction to ML, learning paradigms, supervised learning, unsupervised learning, reinforcement learning
- Machine Learning Algorithms: Decision trees, linear regression, logistic regression, support vector machines, neural networks, deep learning
- Machine Learning Applications: Image recognition, natural language processing, recommendation systems, fraud detection, anomaly detection
- Machine Learning Tools and Platforms: Python programming, TensorFlow, PyTorch.

This FDP helped in gaining a comprehensive understanding of machine learning and developing the skills necessary to contribute to this rapidly evolving field. And the program structure and expert instruction made to advance my skills and knowledge in machine learning

Signature of the Faculty member

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