



INTRODUCTION TO LEARNING ANALYTICS

PROF. RAMKUMAR RAJENDRAN

Educational Technology
IIT Bombay

TYPE OF COURSE : New | Core/Elective | UG/PG

COURSE DURATION : 4 weeks (29 Jul'19 - 23 Aug'19)

EXAM DATE : 29 Sep 2019

PRE-REQUISITES : Basics in Probability, Beginner Level Programming Skill

INTENDED AUDIENCE : Computer Science, ECE, Electrical Engineering, Biotechnology

COURSE OUTLINE :

Learning Analytics is a method to collect, measure, analyze and report data about learners and their interactions with a learning environment. Learning analytics is applying analytics on educational data to infer the student learning process and to provide support. This is an introduction and a first course in the series of learning analytics courses that will be offered in coming semesters.

ABOUT INSTRUCTOR :

Ramkumar Rajendran is an Assistant Professor in IDP in Educational Technology at Indian Institute of Technology Bombay. He obtained his Ph.D. in Computer Science and Engineering from IITB-Monash Research Academy, IIT Bombay and Postdoctoral training at Vanderbilt University, USA.

COURSE PLAN :**Week 1** : What is LA

- Definition
- Relation with Academic Analytics
- Relation with Education Data Mining Learning
- LA - Big-Picture
- Relation with Machine Learning, EDM
- Four Levels of Learning Analytics
- Overview I
- Overview -II

Week 2 : Data Collection

- How Big is Education data
- Data Collection from Learning Environments
- Pre-Processing
- Ethics in Learning Analytics
- Student Privacy

Week 3 : Descriptive Analytics

- Data Visualization Example Dashboard Analytics

Week 4 : Predictive Analytics

- Linear Regression Analytics Tools
- Demo of Weka/Rapidminer
- Demo of Linear Regression using Weka