INTRODUCTION TO LEARNING ANALYTICS

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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