

Introduction to Learning Analytics
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Lecture - 18
Summary of the Course

Hello and welcome back to Introduction to Learning Analytics course, this is the last learning dialogue in this course. I thank everyone who registered for this course and I hope you enjoyed this course.

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What we learned!

- What is LA
- SOLAR and EDM society
- Types of Learning Analytics
- Data collection in different environments
- Ethics and Privacy
- Visualisation
- Predictive Analytics
- Weka tool

The slide features a list of topics covered in the course. To the right of the list is a small portrait of Prof. Ramkumar Rajendran. At the bottom left is the IIT Bombay logo, and at the bottom center is the text 'Introduction to Learning Analytics'.

In this course we saw that what is a LA, what is solar community, what is EDM community, how this LA has come up from these two communities. Also we talked about what are the types of analytics learning analytics like a diagnostics descriptive just what is that. And we discussed bit detail about what are data to be collected in MOOC, what are data to be collected in TELE environment and how to collect data in the classroom environment.

We did not see much detail about how to visualize this data, the visualization like once based on what is your purpose. If you are collecting data from class of 50 or 60 you cannot plot all the 60 points in the data instead you might need to compute the mean or average or the performance in a different buckets like a student's performance from 20 to

30, 30 to 40 something like that. So, it depends on your requirement of the research question.

And we talked about ethics and privacy, its very important before collecting any data we need to inform the users that we are collecting data and the user also have some rights that they can participate in the course or they can say they do not want to participate in the data collection process during the interaction or they decide not to do anything. And we talked about predictive analytics like linear regression; I talked about only one predictive analytics model linear regression just to say how this predictive analytics model look like.

You if you are interested you have to learn more about that you have to go and learn about different predictive models exist in the machine learning tools like Weka or RapidMiner and also we discussed the demonstration of the Weka tool. I hope you enjoyed taking this course and you will enjoy doing this project some more mini project for this course and you will able to take the exams very well.

The aim of this course when I started this course the aim of this course is to just to introduce what is learning analytics not to teach a very deep concept in learning analytics or not to teach a multimodal learning analytics something like that. This aim is to introduce the terms we use in learning analytics and how can you apply the data you collect in the learning analytics and you can interact with someone who is working on learning analytics in the language that is the goal of this course, I hope I achieved that.

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What is Next

- Read books
- Learn about non-linear classifiers
- Collect data – Ethics
- Develop Diagnostic and prediction models
- Try different tools – RapidMiner, Orange etc.
- Next course: Learning analytics Tools – 12 weeks course

Introduction to Learning Analytics

A small video inset in the bottom right corner shows a man with glasses and a light blue shirt, likely the speaker, looking at the camera.

So, what is next? Please read books more books as I mentioned in the first lecture there is no standard book, but go and read the research papers in LAK conference and EDM conference, when you read a papers now you might able to understand the research and you see what data collected, what is the tool they used, what is the algorithm applied read those things and you get more interested in it.

And please learn about non-linear classifiers, as I mentioned linear regression has a linear assumption between these two data, its may not be true always. There are lot of very good classifiers non-linear classifiers ML based classifiers; a probability based classifiers please learn them. And we saw linear regression because it is very easy to start with and collect data please follow the ethics principle and privacy of the learners. Collect data in whatever environment you are working on classroom environment or the TELE or the MOOC or any other environment programming lab please collect data then do the analysis.

When you collect data you have to come up with the list of variables independent variables that will impact the dependent variable. The dependent variable in our example is performance, but in our course project is dependent variable is whether the student will drop out or not. So, the dependent variable is based on your research question please try different tools we saw Weka, but try different tools like RapidMiner its very good tool

orange, these tools actually gives a free license for the academic use. If you have a email id which ends with academic.in ac.in you will get this tool for free.

We plan to offer a next course 12 weeks course with the more deep concepts and rigorous on learning analytics called learning analytic tools. We will discuss more about the tools we use not about the data collection instead we talk about what tools we will use and different tools not just Weka for the diagnostic analytics is there any tools is a pattern mining is there a tool called RapidMiner how it can be used, what are the other algorithms we will discuss that in detail in the 12 weeks course. Thank you for taking the course again.

Thank you.