

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

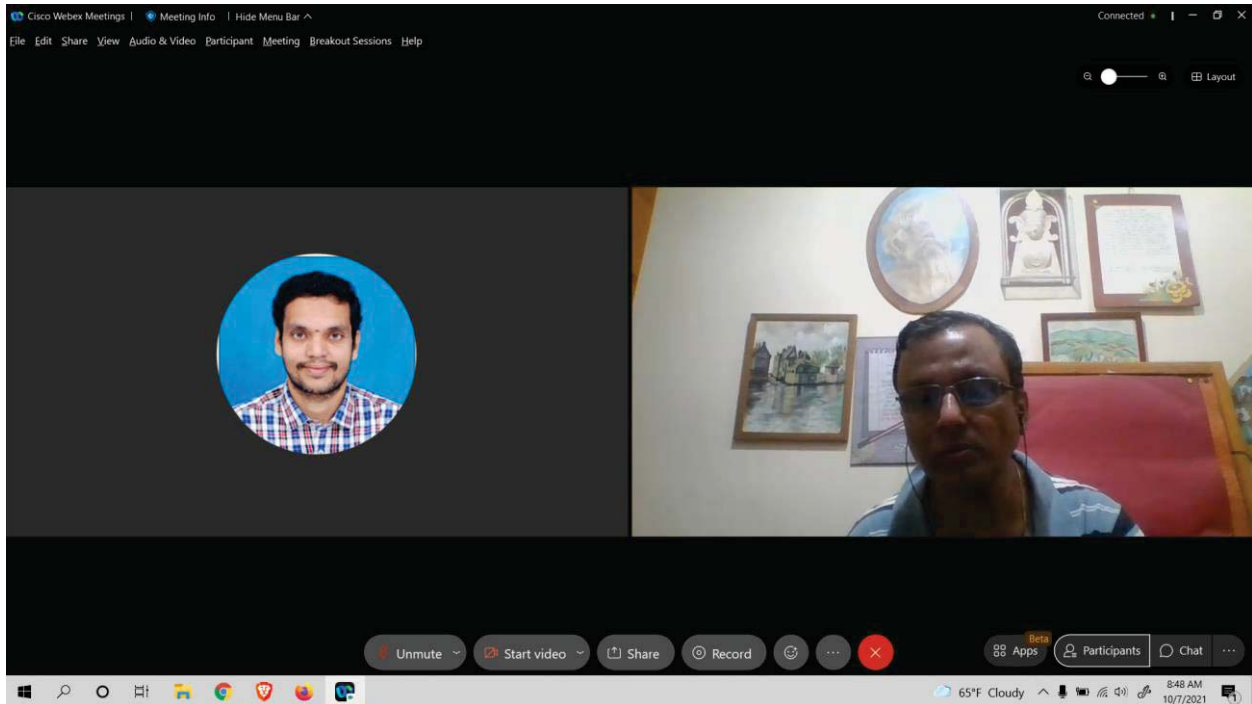


Two Day Hands-on Workshop on “Machine Learning supervised model using Python”



REPORT OF WORKSHOP

The Department of Computer Science and Engineering has organized a Two Day Hands-on Workshop on “Machine Learning supervised model using Python” during 07th – 08th October 2021 for the third year students of CSE Department.



A total of 200 students have attended the workshop. Mr ARUNJIT CHOWDHURY, CEO, EBT has acted as the resource person for this workshop. This workshop has been organized by Artificial Intelligence and Machine Learning Research group of Department of Computer Science and Engineering. Dr K Survarna Vani, Research Group Coordinator along with Dr M Sobhana and Ms S Rajeswari coordinated the event. The workshop has been organized from 9 AM till 11.30 AM on both the days.

Day1: 7th October 2021

Speaker: Arunjit Chowdary
CEO
Enterprise Building Taining Solutions

Topic: Types of Machine learning

This session was handled by Arunjit Chowdary sir , he handled the session on teaching the difference between artificial intelligence and machine learning and discussed the applications of machine learning as

- 1.Retail:Market Basket Analysis-Crosss selling /up selling
- 2.Finance:Credit score card, Fraud Detection.
- 3.Medicine:Medical Diagnosis
- 4.Web mining
- 5.Language translators.

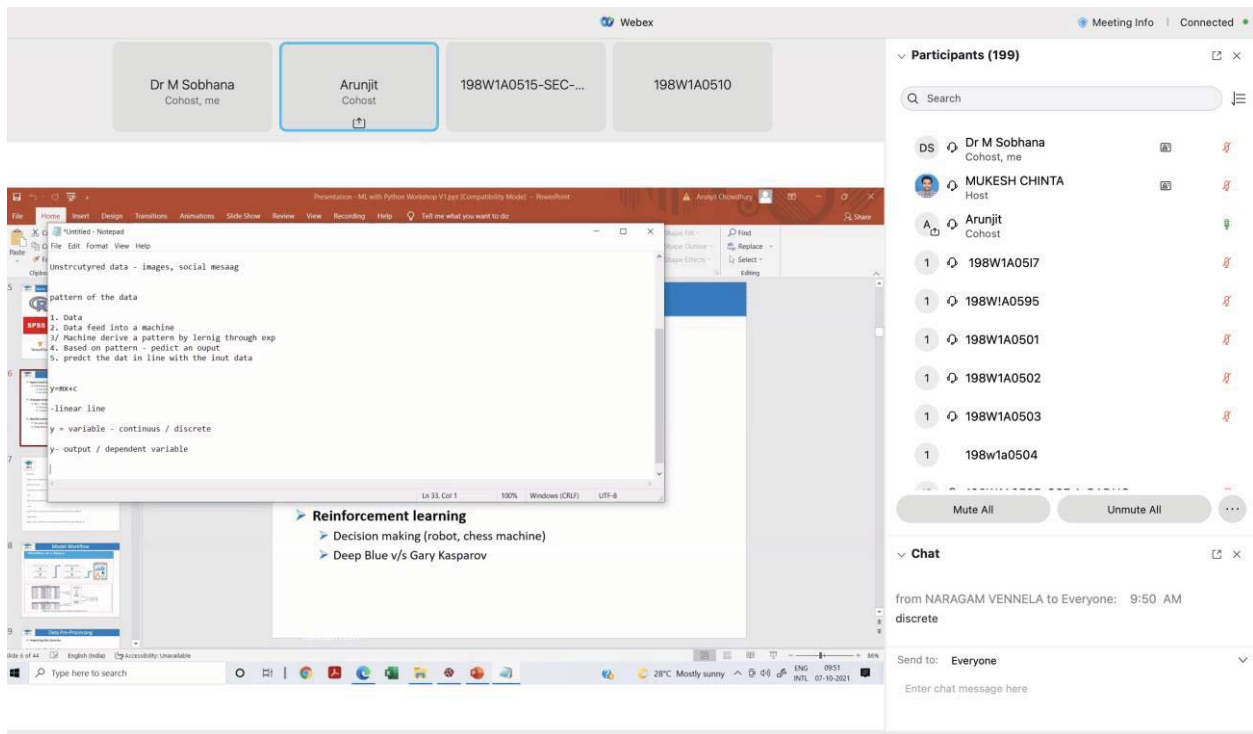
He also explained the various types of machine learning as supervised learning, unsupervised learning and reinforcement learning with real world scenarios.

He explained the workflow of machine learning model as importing of libraries, importing the dataset, preprocessing the data (handling missing values, categorical values,scaling),fitting a model to the data, performance evaluation of the model.

The screenshot shows a Cisco Webex meeting interface. At the top, there's a meeting bar with the title 'Cisco Webex Meetings | Meeting Info | Hide Menu Bar'. Below that, a participant bar shows several participants, with 'Arunjit Chowdary' highlighted. The main content is a presentation slide titled 'Examples of Machine Learning' from EBTS. The slide lists several applications of machine learning:

- Retail: Market basket analysis - Cross Selling / Up Selling
- Finance: Credit Scorecard, Fraud detection
- Medicine: Medical diagnosis
- Web mining: Search engines
- Language Translators
- Natural Language Processing
- Spam Mail
- Chatbot
- Movie and Product Recommendations

There are two diagrams on the slide: 'Cross Sell' showing a burger and fries leading to a drink, and 'Up Sell' showing a burger and fries leading to a larger burger and fries. The meeting interface also shows a participants list on the right with 200 participants, and a bottom bar with controls like 'Unmute', 'Start video', 'Share', and 'Record'.



Day2: 8th October 2021

Speaker: Arunjit Chowdary
CEO
Enterprise Building Taining Solutions

Topic: Types of Regression and Classification

This session was handled by Arunjit Chowdary sir , he discussed on the various types of regression like

- 1.Univariate regression
- 2.Multivariate regression
- 3.Polynomial regression

Univariate regression: It focuses on determining relationship between one independent (explanatory variable) variable and one dependent variable. Multivariate regression: A type of regression that provides a mathematical model that attempts to explain or predict the dependent (outcome or target) variable by simultaneously considering 2 or more independent (or predictor) variables.

Polynomial regression: Polynomial regression is a form of regression analysis in which the relationship between the independent variable x and the dependent variable y is modelled as an n th degree polynomial in x .

He enlightened the students with the code related to classification of data using an example. He made the session interactive by conducting a quiz on the topics discussed in the sessions by dividing the students into three groups.

The screenshot shows a Zoom meeting interface. At the top, there are participant names: Dr M Sobhana, Arunjit - EBTS, 198W1A0594, and 198W1A05G6. The main content is a presentation slide titled "Classification : Vertebrate Data Set". The slide contains a table with columns: Name, Body Temperature, Virens, Fleshy Stalks, Appendages, Actual Class, Hair Length, Habitat, and Status Label. Below the table, there is a flowchart showing the process: Training Set (with columns: Age, Sex, Size, Color, Class) leads to Learning Algorithm, which produces a Learn Model. This model is used to Apply Model to a Test Set (with columns: Age, Sex, Size, Color, Class), resulting in a Model. The process is labeled as Figure 4.3: General approach for building a classification model.

The screenshot shows a Zoom meeting interface with a Spyder Python IDE open. The IDE displays code for Logistic Regression. The code includes imports for sklearn, numpy, and matplotlib, followed by data loading from 'Social_Network_Ads.csv', splitting the data into training and testing sets, fitting a LogisticRegression model, and predicting the results. The output of the prediction is shown in a console window, displaying a list of predicted class labels (0 or 1) for each data point.





Towards the end of the session, the coordinator Dr. M.Sobhana conveyed her vote of thanks to the speaker who enlightened the students on the scope of projects in Machine learning.