Report on Guest/Expert Lecture

Organized by

Department of Electronics & Telecommunication

1. **Program type:** Guest/Expert Lecture on Data Science

2. **Date & Time:** 05/10/2020 & 9.30am to 11.30 am

3. **Venue:** online-Google meet

4. **No. of students registered/appeared:** 201

5. **Target students:** SE E&TC, TE E&TC, BE E&TC

6. **Fee Details:** FREE

7. **Instructor details:** Ms. Hima Patel,Ms. Nitin Gupta,Mr. Shashank Mujumdar

    IBM Research Lab,India

    himapatel@in.ibm.com,ngupta47@in.ibm.com,shamujum@in.ibm.com

    9611133668.

8. **Objectives :**

    1) Explore supervised and unsupervised learning paradigms of machine learning used for-regression and classification.
    2) To design and analyze various machine learning algorithms using neural networks
    3) To explore Deep learning techniques and various feature extraction strategies.

9. **Outcomes:**

    1) To compare and contrast pros and cons of various machine learning techniques and to get an insight of when to apply a particular machine learning approach.
    2) To mathematically analyze various data cleaning approaches
    3) To implement unstructured data and applications.

Photo gallery:
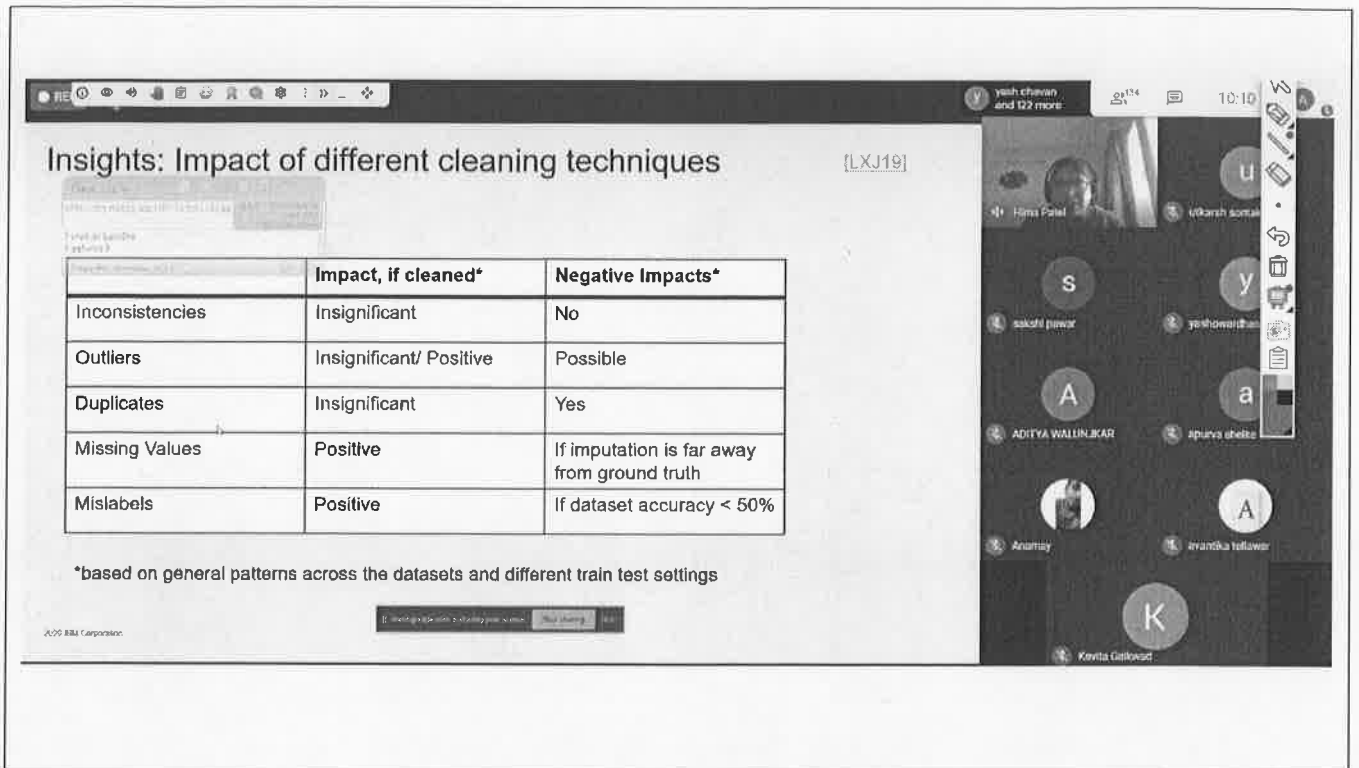
Insights: Impact of different cleaning techniques [LXJ19]

	Impact, if cleaned*	Negative Impacts*
Inconsistencies	Insignificant	No
Outliers	Insignificant/ Positive	Possible
Duplicates	Insignificant	Yes
Missing Values	Positive	If imputation is far away from ground truth
Mislabels	Positive	If dataset accuracy < 50%

*based on general patterns across the datasets and different train test settings

Image 1: Ms. Hima Patel explaining data cleaning techniques

Common Data Cleaning Techniques

Data Cleaning Issues

Quantitative | Qualitative

- Missing Values
- Outliers
- Noise in the data
- Noise in labels
- Data Linters
- ...

Integrity Constraints based errors (not covered)
- Functional Dependency Constraints
- Denial Constraints
- Others ..
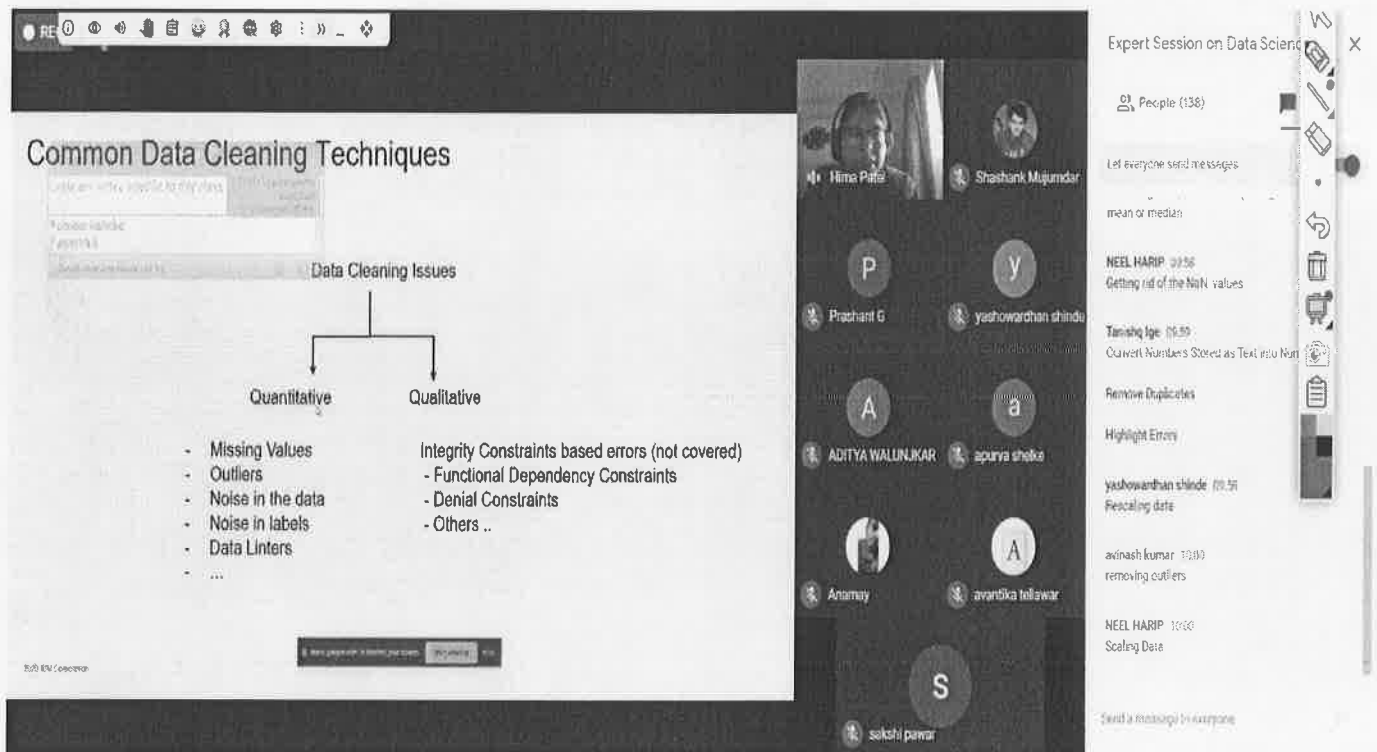
Image 2: Ms. Hima Patel Explaining common cleaning techniques

Image 3: Mr. Nitin gupta explain the approaches for filtering in Data Science

Prof. Ashvini Kulkarni

Event Coordinator

Dr. Risil Chhatrala

Head of Department