Data Analysis Tools for experimental research

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| S.N | Date | Day | Topic |
| 1 | 15.03.2024 | Friday | Regression Basics: Response Surface Methodology |
| 2 | 19.03.2024 | Tuesday | Response Surface Methodology Tutorial  (Two variable) (Tutorial 1)  HW-Paper and pencil calculation |
| 3 | 21.03.2024 | Thursday | Principal Component Analysis (Tutorial 2)  HW-Paper and Pencil calculation |
| 4 | 22.03.2024 | Friday | Regression used on dimension reduction, t-Stochastic neighborhood Embedding (t-SNE) basics and Grad descent. (Tutorial 4A)  Assignment Project on gradient descent |
| 5 | 26.03.2024 | Tuesday | HOLIDAY |
| 6 | 28.03.2024 | Thursday | HOLIDAY |
| 7 | 29.03.2024 | Friday | HOLIDAY |
|  | 1.04.2024 | Monday | tSNE continued – low dim matrix, distance calculation, probability density function and KL divergence, (Tutorial 4B) |
| 8 | 02.04.2024 | Tuesday | tSNE-Tutorial (Tutorial 4C) |
| 9 | 04.04.2024 | Thursday | Revision Quiz on regression/ |
| 10 | 05.04.2024 | Friday | Practice Python |
| 11 | 09.04.2024 | Tuesday | 2-way ANOVA and hypothesis testing |
| 12 | 11.04.2024 | Thursday | ANN model for forecasting (Tutorial 5A) |
| 13 | 12.04.2024 | Friday | ANN model for forecasting (Tutorial 5B) |
| 14 | 16.04.2024 | Tuesday | ANN modeling: classification (Tutorial 6A) |
| 15 | 18.04.2024 | Thursday | ANN classification (tutorial 7) |
| 16 | 19.04.2024 | Friday | Image analysis using convolution network: Tutorial 8A |
| 17 | 23.04.2024 | Tuesday | Image analysis using convolution network: Tutorial 8B |
| 18 | 25.04.2024 | Thursday | Image analysis using convolution network: Tutorial 8C |
| 19 | 26.04.2024 | Friday | Endsem |
| Note: Timings for the class: Tuesday 10:11, Thursday 12-1, Friday: 9-10  Marks distribution:  Tutorials: 20%  Attendance: 10%  Project: 20%  Endsem: 40%  Midsem Practice exam: 10% | | | |