IIT ROORKEE

NPTEL ONLINE CERTIFICATION COURSE

MULTIPLE LINEAR REGRESSION-PART VI
Partial Iterative Search
LECTURE 27

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MULTIPLE LINEAR REGRESSION

- Partial-iterative search
  - Computationally cheaper
  - Best subset is not guaranteed
    - Potential of missing “good” sets of predictors
  - Produce close-to-best subsets
  - Preferred approach for large no. of predictors
  - For moderate no. of predictors, exhaustive search is better
- Trade-off between computation cost vs. potential of finding best subset

MULTIPLE LINEAR REGRESSION

- Partial-iterative search algorithms
  - Forward selection
    - Add predictors one by one
    - Strength as a single predictor is used
  - Backward elimination
    - Drop predictors one by one
  - Stepwise regression
    - Add predictors one by one and consider dropping insignificant ones
- Open RStudio

Key References

- Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data by EMC Education Services (2015)
- Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner by Shmueli, G., Patel, N. R., & Bruce, P. C. (2010)

Thanks…