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|  | **Program Name: Introduction to R for Machine Learning** | | |
|  | **Session** | **Objectives** | **Program Structure** |
| **PART I** | **Basics of R**   1. Installing R, RStudio 2. R Datatypes 3. Basic syntax 4. Variables 5. Vectors 6. Matrices 7. DataFrames 8. Lists | Introduce participants to the basics of R. Participants will be able to do simple data manipulations such as looping through a sequence of numbers to find totals etc. | Presentations, discussions |
| **Data Interfaces**   1. CSV files 2. Excel files 3. Text files 4. Databases 5. Web links | Introduce participants to the R way of loading multiple types of data from various sources | Presentations, discussions,  Case studies on implementation of machine learning |
| **PART II** | **Basic statistical functions**   1. Mean, Median, Mode 2. Liner regression 3. Multiple regression | Familiarize participants to R functions for basic statistical analysis | Presentations, discussions, hands on? |
| **Charts and graphs**   1. Pie chart 2. Line charts 3. Scatter plots 4. HIstograms | Introduce participants to R tools and techniques for creating charts and graphs | Presentations, discussions |
| **PART III** | **R Packages**   1. Installed packages, install packages 2. RMysql 3. Packages for web | To introduce the various functions available to install various specialized packages available and how to use them | Presentations and discussion on live case studies |