Data Science & AI Bootcamp

short line

# Beginners Class Curriculum R

**Day 1.**

1. Introductions

Objective: Team Building. Enables Instructor later pair students with strong skills with very early beginners

Tasks: Each person to talk about themselves and more importantly where they are in technology/Data science

2. Discuss Breakthrough AI products in the they are interested in

Tasks: Get candidates to name AI powered products

3. Understanding Coding and Algorithms

Objective: Demystify Algorithms

**Tasks:** Write an algorithm for completing a task in their current field of endeavor. E.g Someone with an Agric background can write an algorithm (steps) for harvesting.

4. Introduction to Programming (Basics of R)

1. Arithemethic with R
2. Comparison Operators
3. Data Types
4. Variables
5. Vector Operations

5. Homework

Simple Coding Exercises to further demonstrate this skills

**Day 2:**

6. Introduction to Data Concepts via R

R Data frame

R Lists

R Matrices

7. Data Manipulation using dplyr and tidyr

1. Guide to using dplyr
2. Overview of dplyr and tidyr

8. Supervised Class Assignments and Take Home Assignments

d. List of Topics Based on Perceived areas of most difficult Implementation.

Day 3:

9. Data Visualisation

1. 2 variables plotting

b. Boxplot

c. Histogram

d. Scatterplot

e. Interactive data visualisation with plotly

**Day ⅘**

Project Work and Presentation

Guide Instructions on quick-win techniques

Will be Important at this point to spend some time with the final presenter to aid flawless communication of the work done.

# Materials & Resources

1. Instructional Materials:
2. Resources:

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