



Predictive Analytics with R in Power BI



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**From
Descriptive
To
Predictive
Analytics**

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From Descriptive To Predictive Analytics

Agenda



Descriptive Analytics



Key Concepts

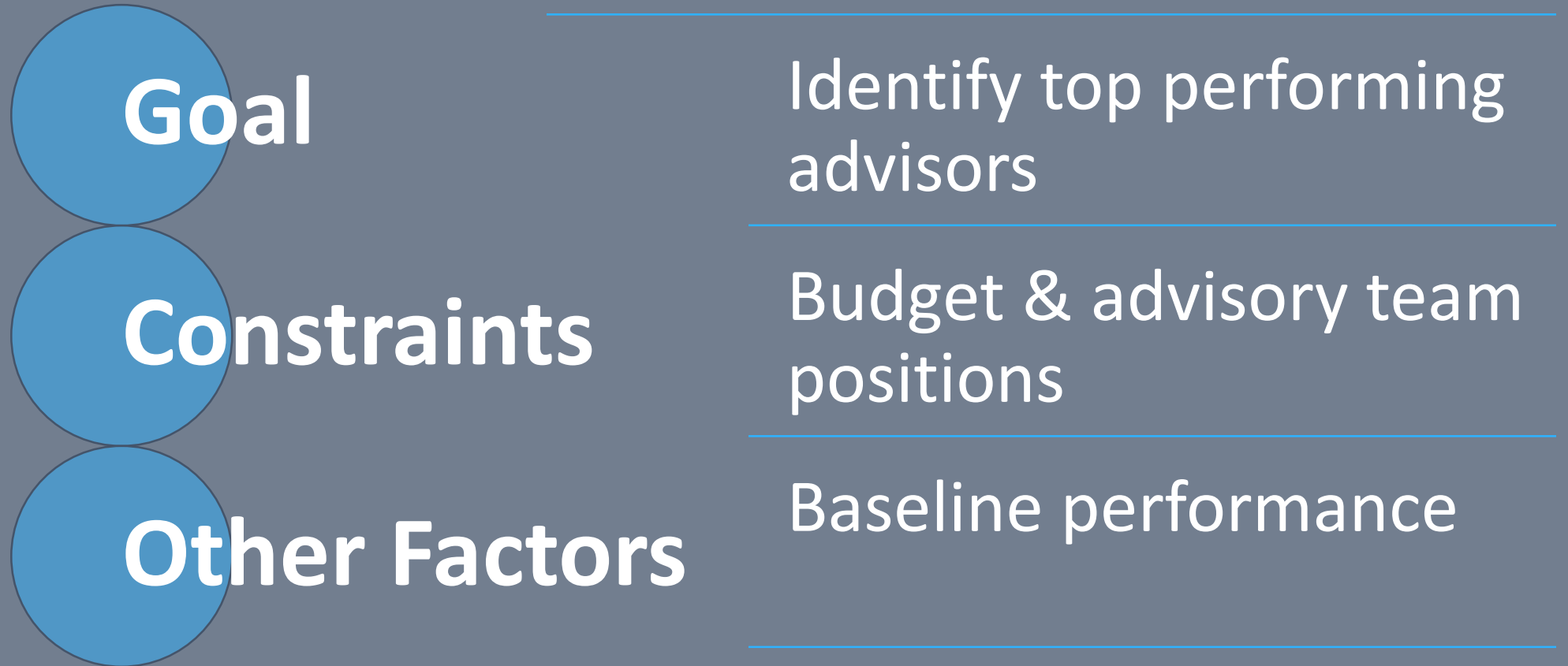


Predictive Analytics



Integration

Business Scenario



Descriptive Analytics with Power BI

Exploratory

Total Revenue

Visualization

Cost (Income)

Analysis

Advisor Position

Descriptive



Key Concepts

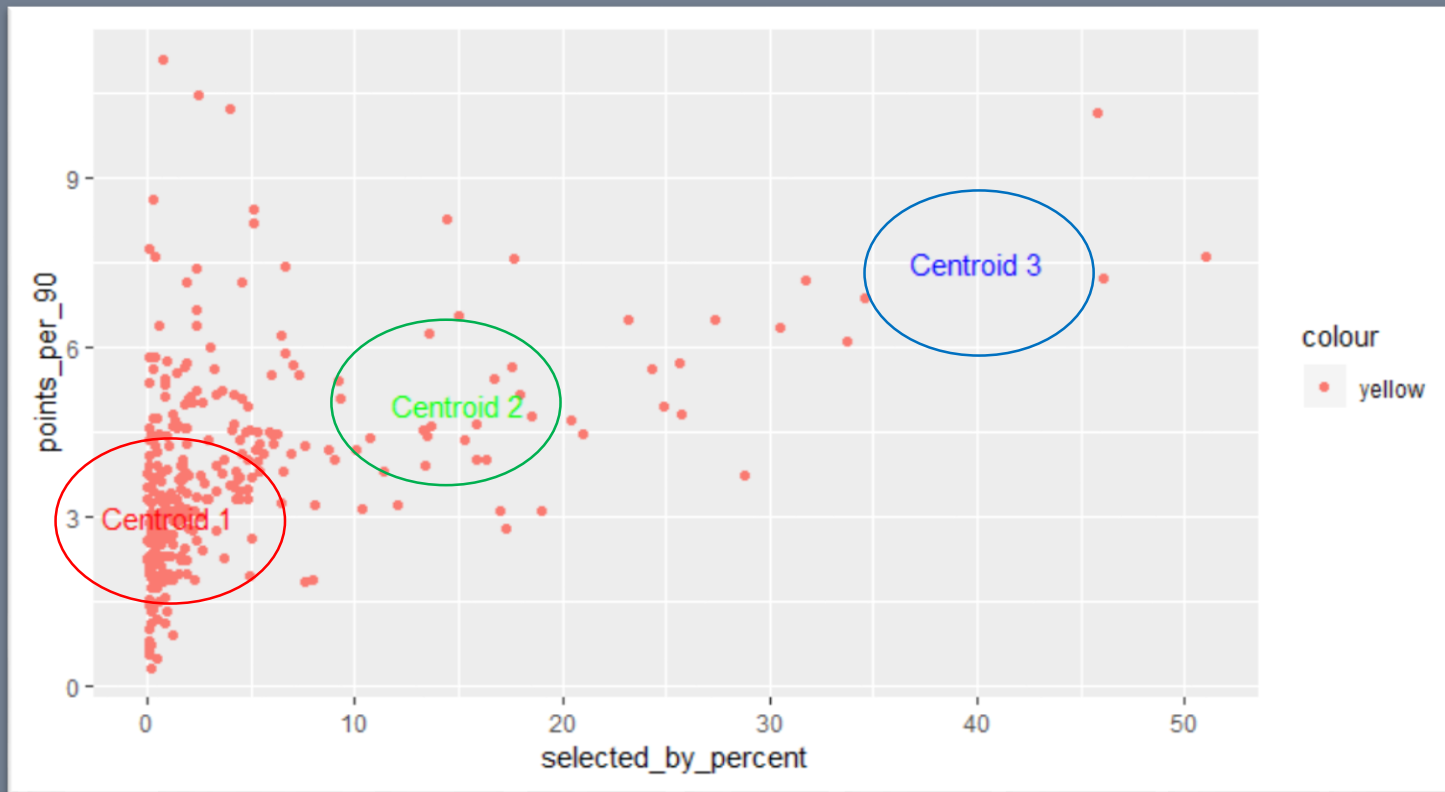
1. ***Performance***: How well does our model predict the dependent variable?
2. ***Generalization***: How well will our model perform on new data points?

K-Means Clustering

- Unsupervised
- Requires Interpretation & Configuration
- Iterative Process
 - Plot Centroids
 - Assign Data Points to Clusters
 - Re-plot Centroids

K-Means Clustering

1

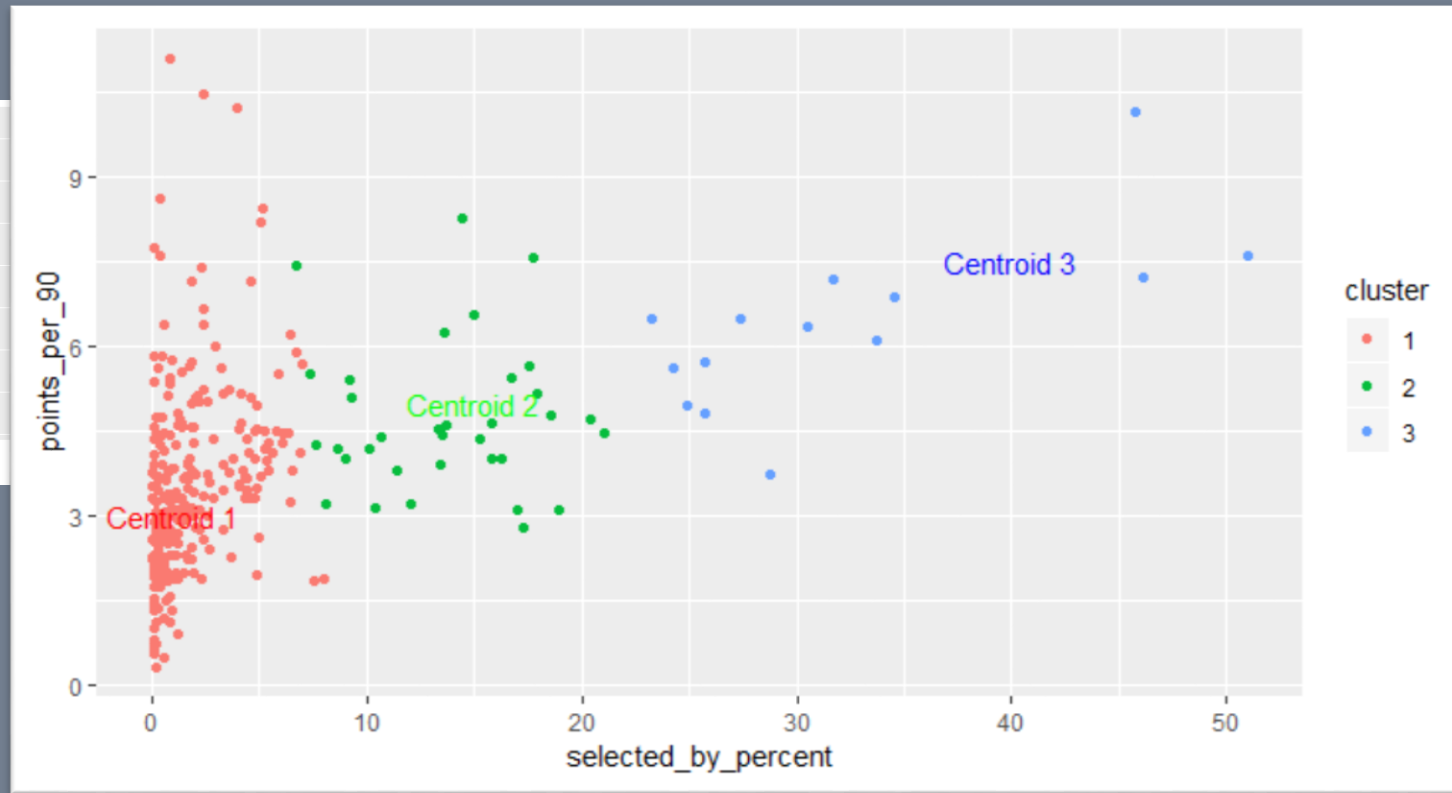
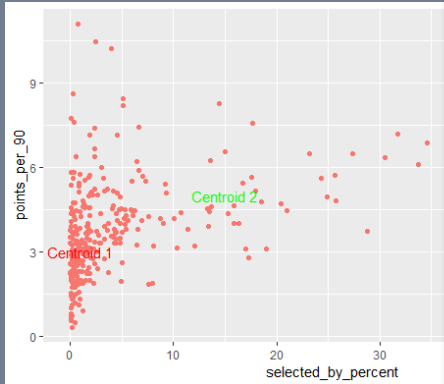


Key Concepts

K-Means Clustering

1

2



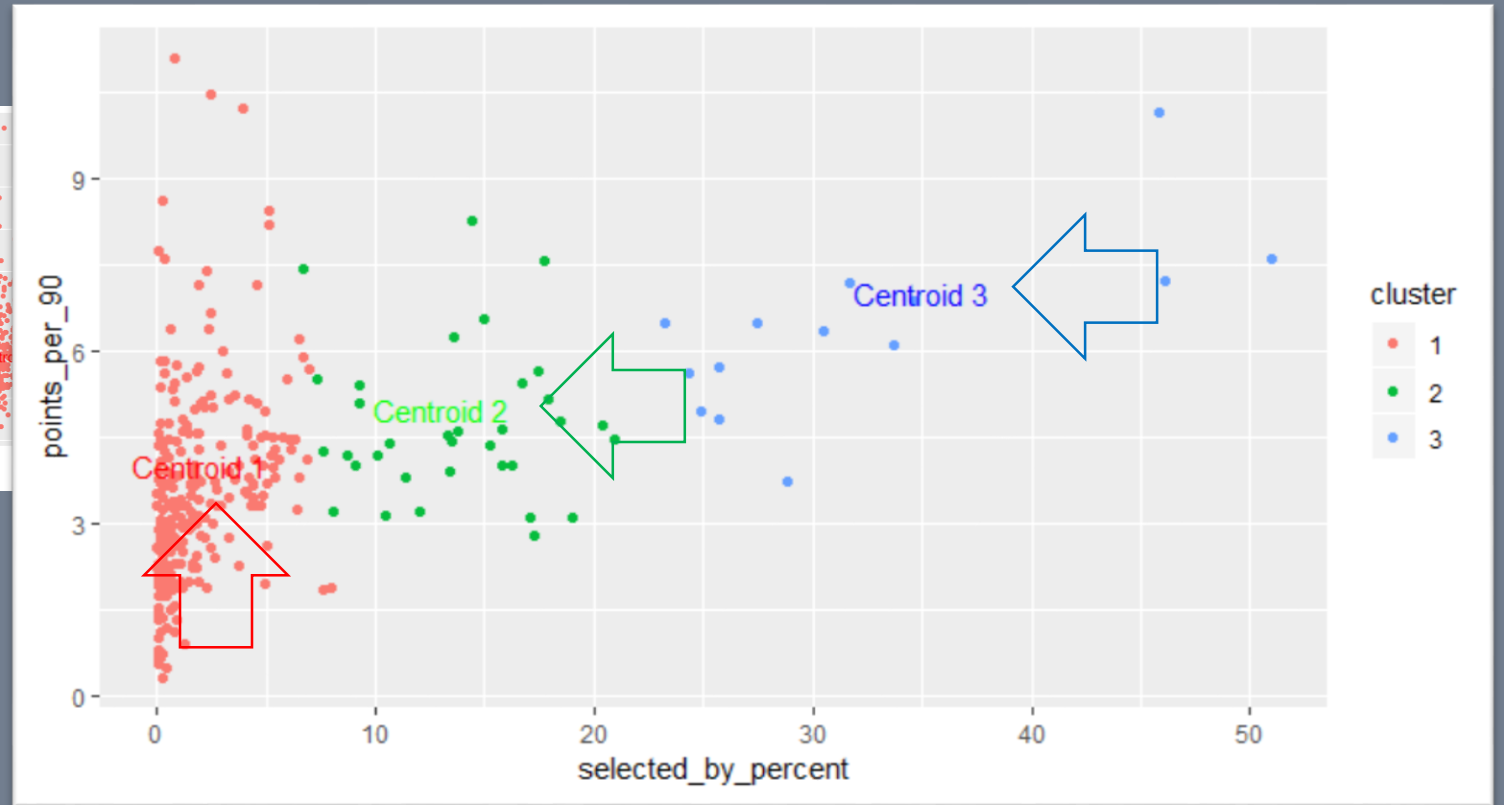
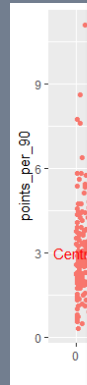
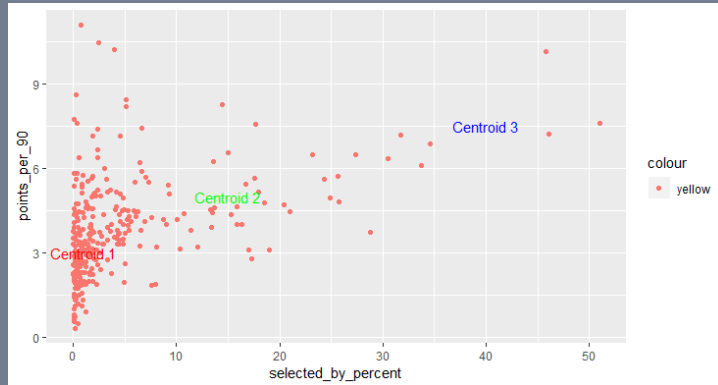
Key Concepts

K-Means Clustering

1

2

3



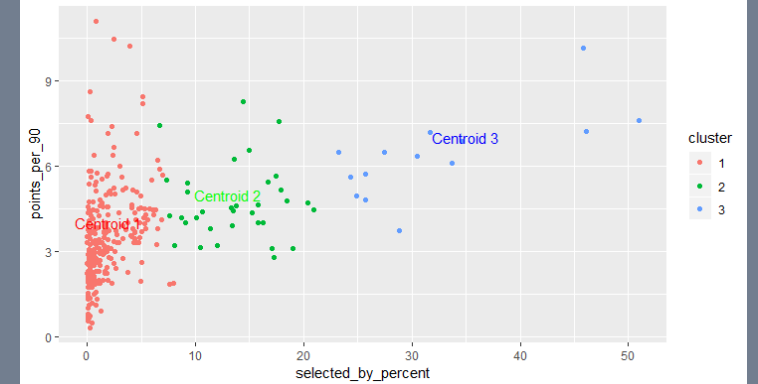
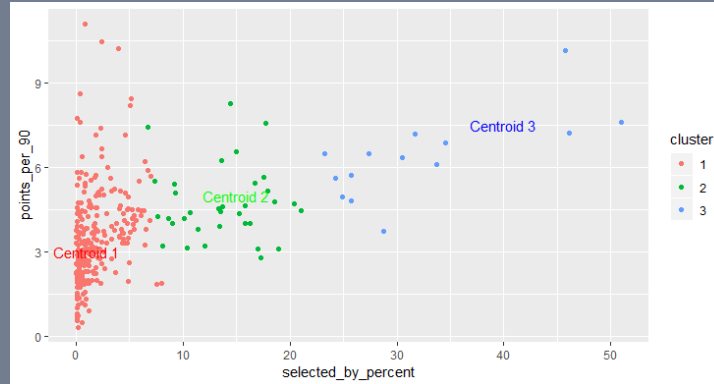
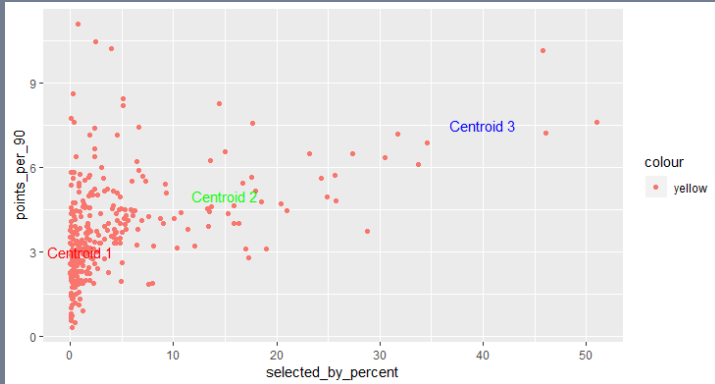
Key Concepts

K-Means Clustering

1

2

3

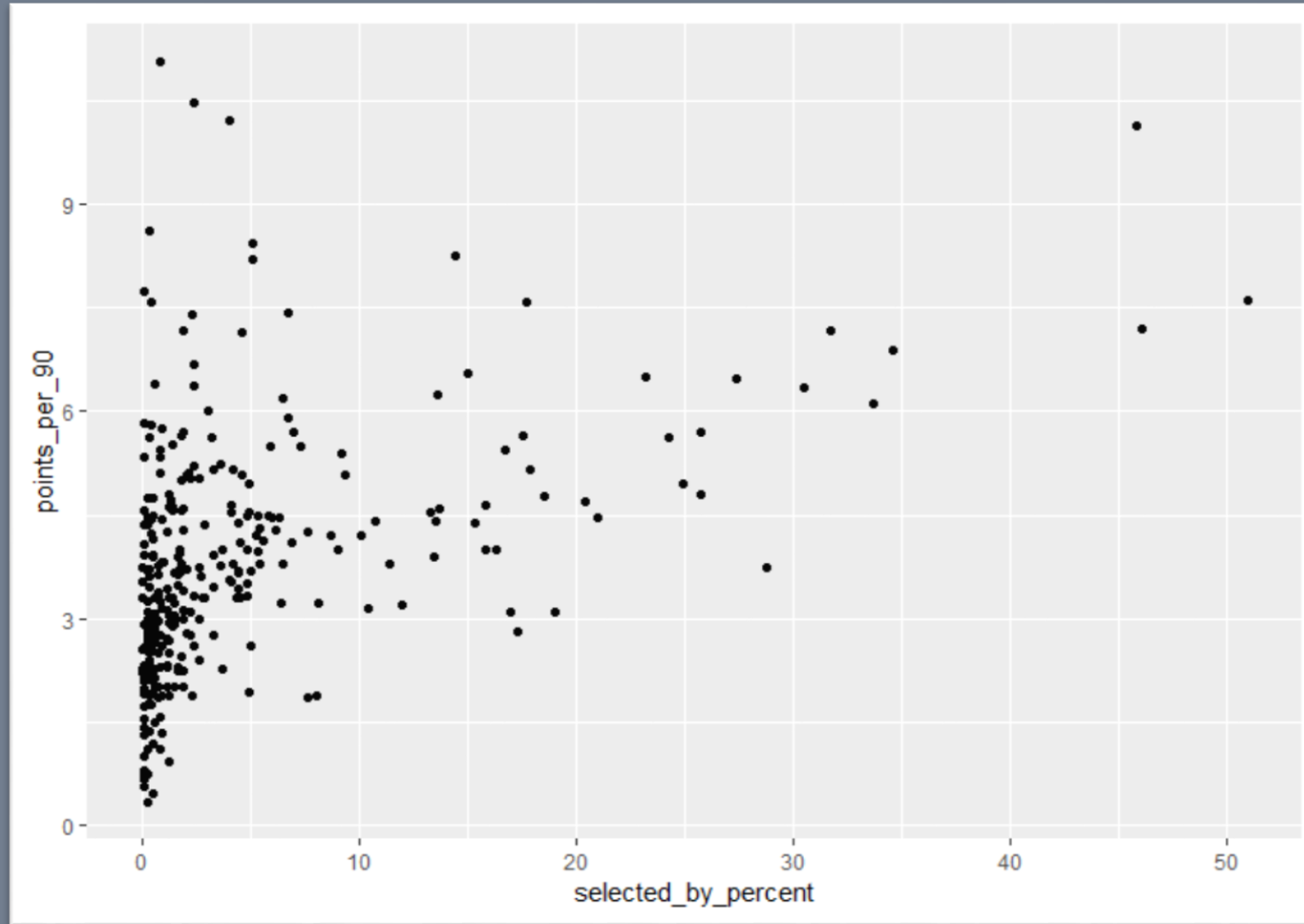


Key Concepts

Linear Regression

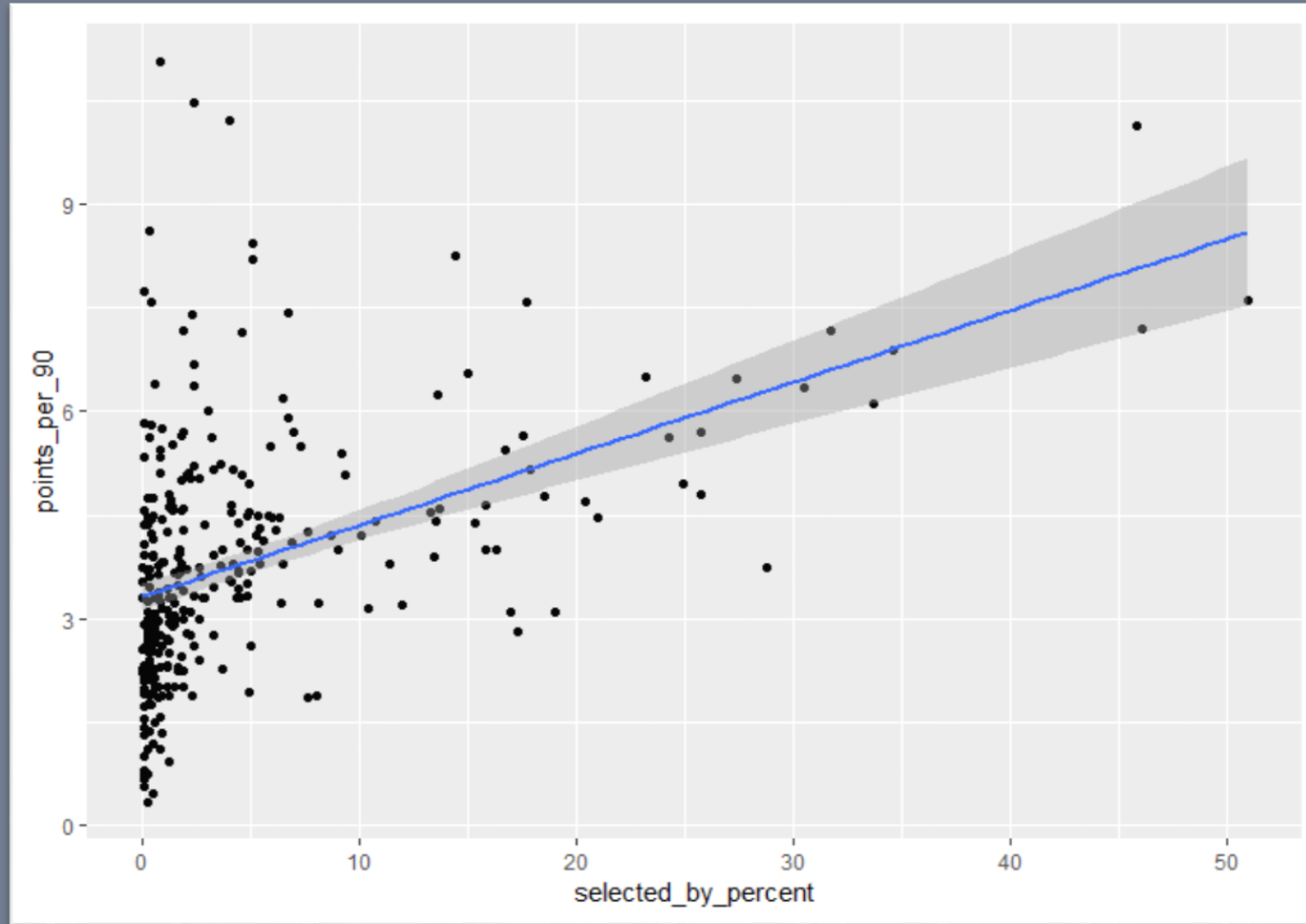
- Supervised
- Requires Labeled Input
- Fit a linear equation to model relationship between target and predictor variables

Linear Regression



Key Concepts

Linear Regression



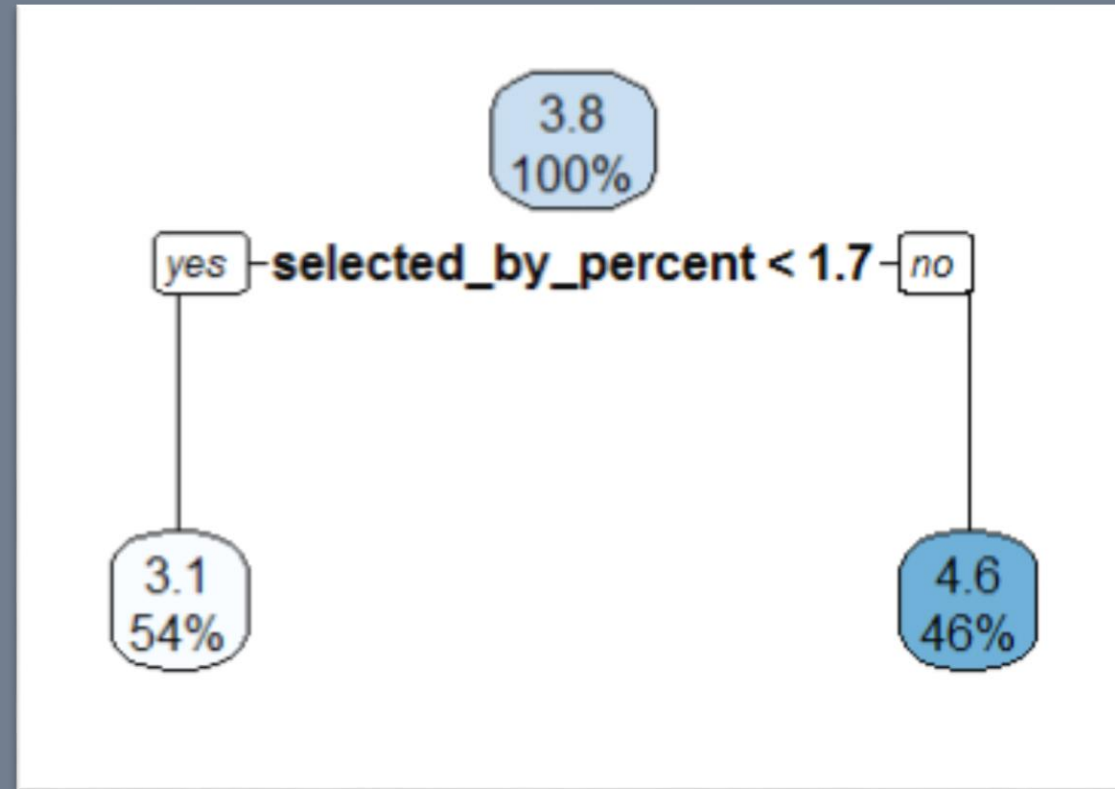
Key Concepts

Classification Tree

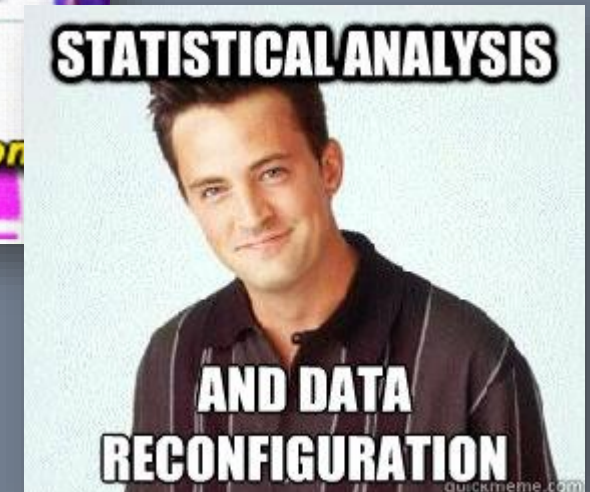
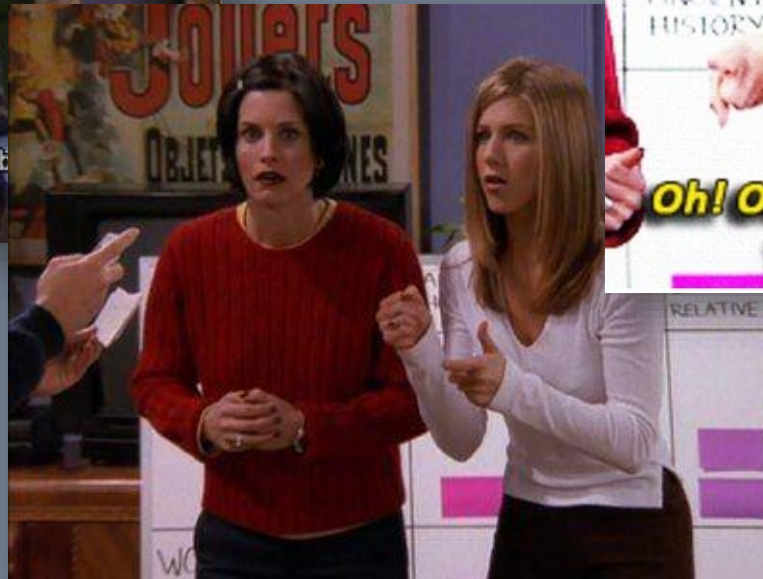
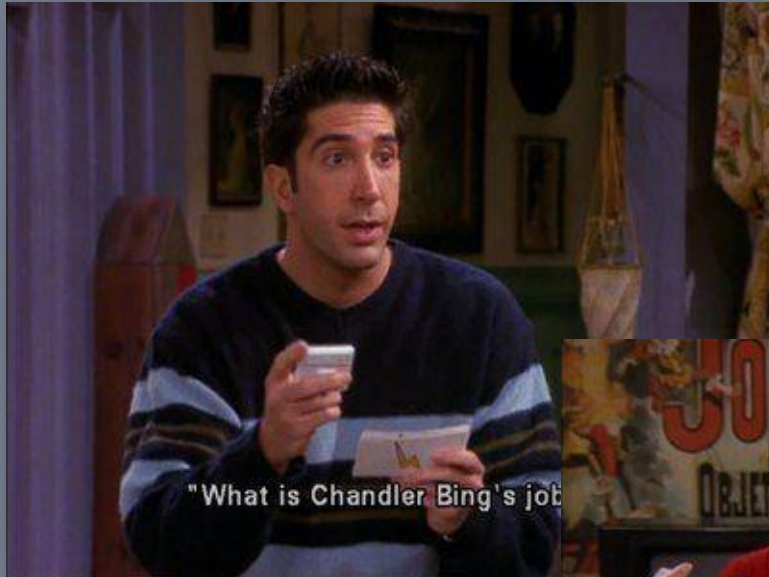
- Supervised
- Requires Configuration
- Split data into groups with series of Yes/No questions



Classification Tree



What is R?



Predictive

Basics with R

Assignment

```
filepath <- "C:/Users/Source Data.xlsx"
```

Functions

```
source_data <- read_excel(filepath, sheet = "data")
```

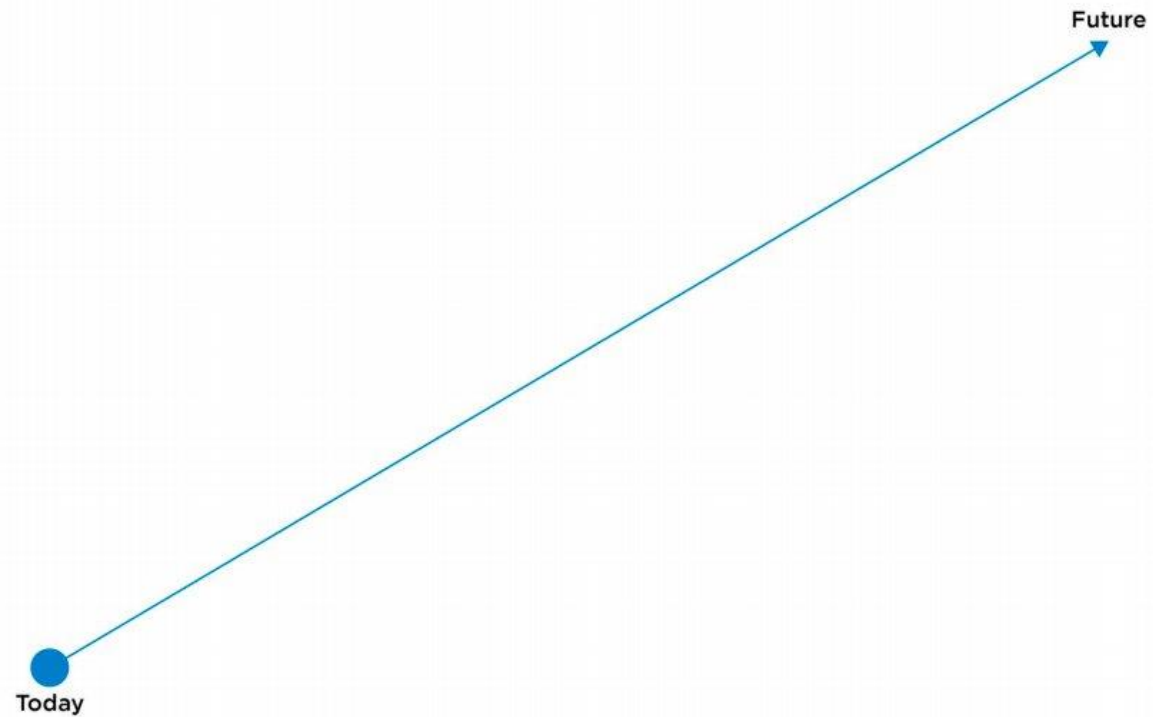
Piping

```
new_data <- source_data %>%  
  select(id, total_revenue)
```



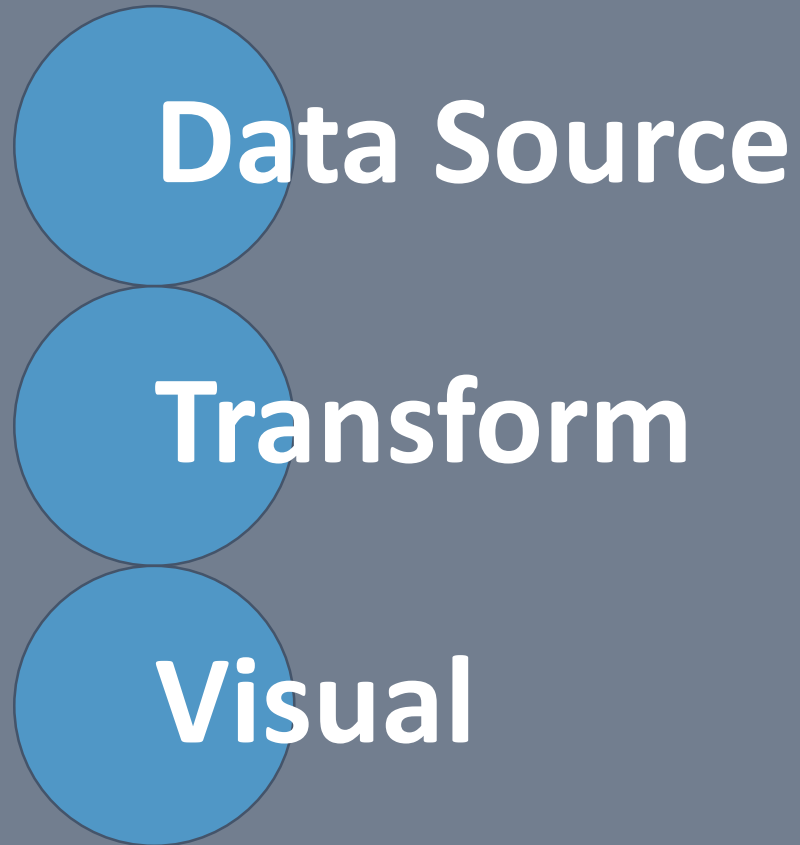
Integration

Where do we want to go?



Integration

Descriptive to Predictive



R Script Connector

Power Query R Script

R Script Visual

Integration



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