Fundamental Analysis

Unsupervised ML on S&P 500 Financial Statements

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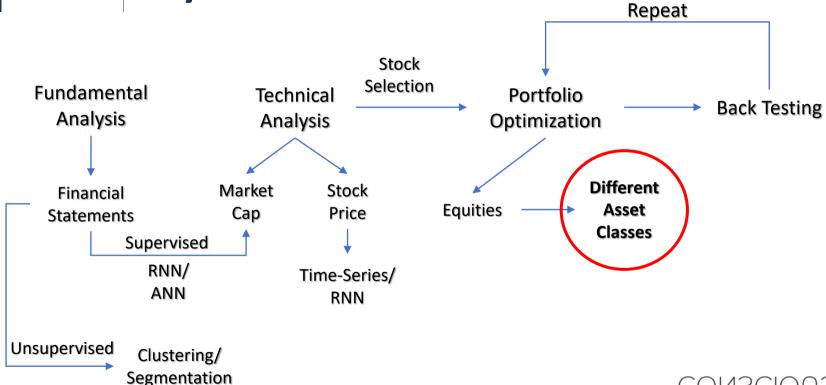# Agenda

1. Bot Analyst Overview

2. Fundamental Analysis Overview of Outcomes

3. What is unsupervised ML (Clustering)
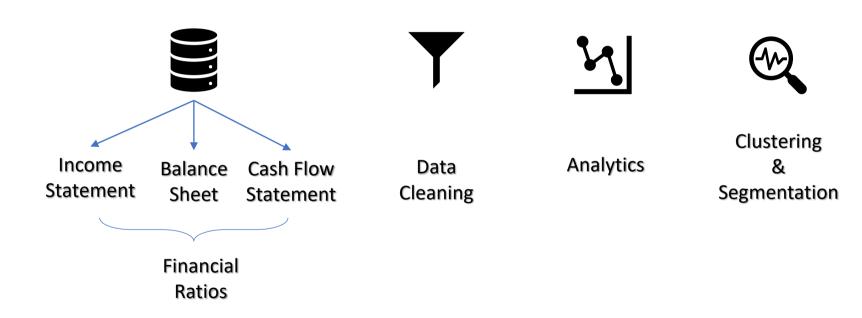
4. Outputs

5. NOC Performance against JSE SWIX Top 40

Bot Analyst Overview: Phase 1

Fundamental Analysis Overview

Income Statement · Balance Sheet · Cash Flow Statement

Financial Ratios

Data Cleaning

Analytics

Clustering & Segmentation

What is unsupervised ML (Clustering)

"the objective of K-means is simple: group similar data points together and discover underlying patterns. To achieve this objective, K-means looks for a fixed number (k) of clusters in a dataset."

Output: Web Scrapped Data

Live Demo

Output: Variables

Piotroski Score:

- Piotroski F-score is a number between 0 & 9 which is used to assess strength of a company's financial position
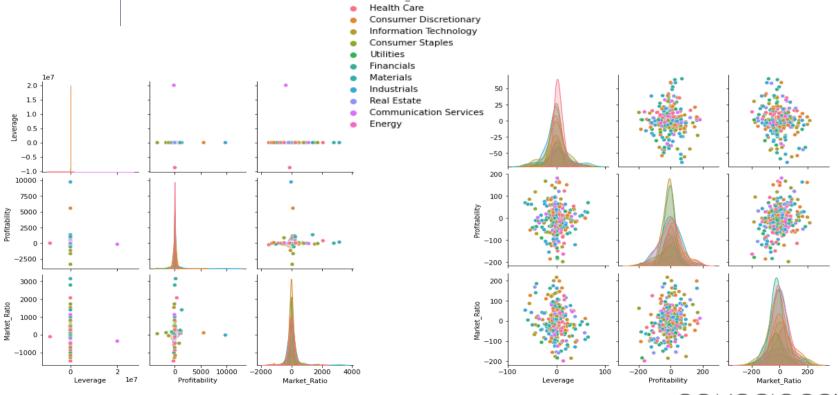
$$\Delta = Y_T - Y_{T-1}$$

Leverage:

- Debt/Equity
- Debt/EBITDA
- DEBT/FCF
- Current Ratio

Profitability:

- ROE
- ROA
- ROIC
- FCF YIELD

Market ratio:

- PE Ratio
- PS Ratio
- PB Ratio
- Market Cap Growth
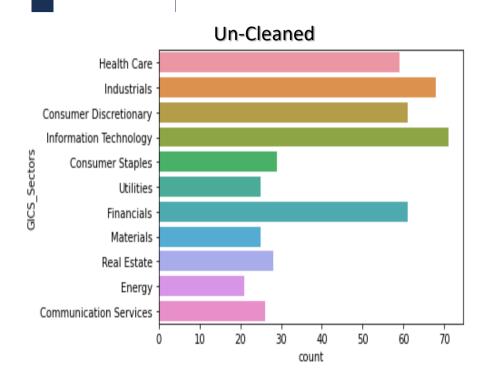
Output: Data Uncleaned
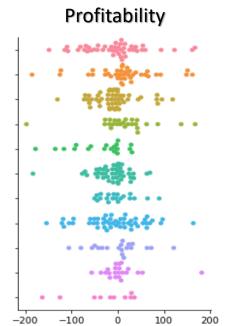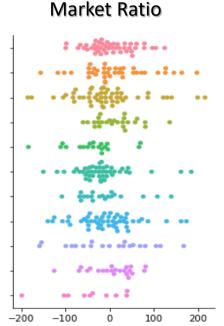
Output: Sectors
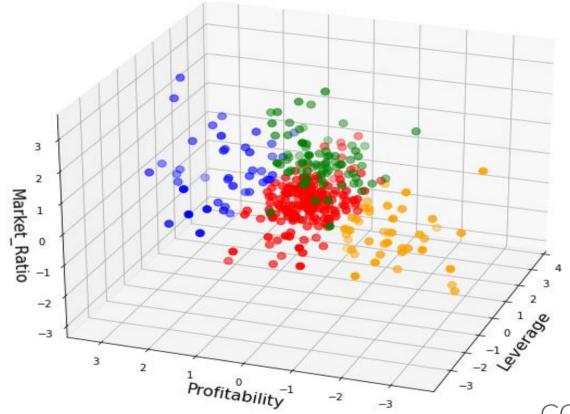

Un-Cleaned
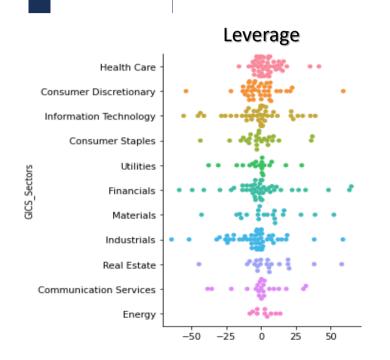
Output: Data Cleaned

What is unsupervised ML (Clustering)

"the objective of K-means is simple: group similar data points together and discover underlying patterns. To achieve this objective, K-means looks for a fixed number (k) of clusters in a dataset."
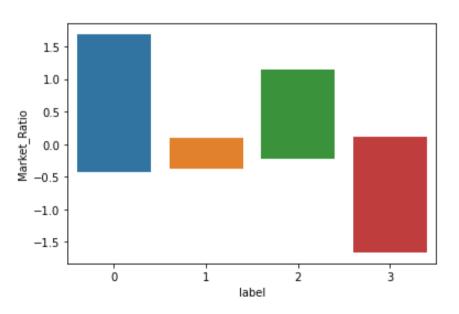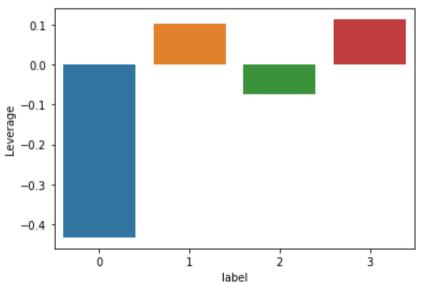
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Output: Clustering k=4

Output: Segmentation

Company Personas

Live Demo

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Thank You

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