Overall Pipeline Flow –

1) Enter Stock
2) Analyse if Hala or not
3) Analyse for Buy/Sell Rating
    a. Method A – Normal/Traditional Method using Financial Statements
        i. Cashflow
        ii. Income Statement
        iii. Balance Sheet
        iv. Use Industry Data as well
            1. (Need to learn how to read them – YouTube? Investment for Dummies type book? Etc
    b. Method B – Machine Learning
        i. Price and Volume data
        ii. Financial Statements (Relevant Ratios i.e. ratios with the highest corelation)
        iii. Indicators
        iv. Use Indisutry Data as well
            1. Need to Learn ML Algorithims/Models overall and pick a few to try.
    c. Quant Strategies
        i. (Need to learn)
            1. Maybe Quant Finance for dummies is a thing to get a conceptual understanding of the topics and then I can pick and learn the relevant one(s) in more detail i.e. the maths behind it and the implementation for it

Note:

- In terms of financial data use yahoo finance or Kyffin (but stick with one)

Phases

P1 – The Data:

1) Finalise between Yahoo Finance and Koyfin
   a. Free >>> Fast and Informative
      i. If need be, create the metrics/ ratios koyfin has/uses using the yfinance data?
2) Import stock data i.e. relevant financials that are needed to determine if it is halal or not
   a. (P2)
3) Find the rules of Islamic Investing and determine the ratios/ data required
4) Industry check as well
   a. Industries like Alcohol, weapons, banks (interest), Entertainment (i.e. pornography, music etc), gambling are not halal
5) Type of conditions to check:
   a. Debt, Haram Income (i.e. interest based income) etc (need to research/find them)

P2 – The Halal/Haram Analysis:

1) Analyse the financials to determine if the stock is halal/haram
   a. Do it for the last 3 years of data
      i. Return 12 yes/no (4 quarters per year)
      ii. Ensure its halal by "choice" consistently and not accidentally

P3 – Analysing the Stock:

1) 3A/Method A – Normal/Traditional Method
   a. Financial Statements (Need to learn to read them and extract the relevant data)
   b. Determine the important metrics and what they signify
   c. Determine trends on those metrics (last 10 years)
   d. Determine projections on those metrics
   e. Determine if the metrics + metric projections mean to buy/sell now or later when a specific value of the metric(s) or price is reached

2) 3B/Method B – Machine Learning
   a. Get close price & volume data over the last 10 years (1D time frame)
   b. Get relevant financial metrics over the last 10 years
      i. Must figure out a way to deal with dimension mismatch
         1. Close Price over the last 10 years = 2520 days
         2. Financial metric over the last 10 years = 40
   c. Indicators
      i. MACD
      ii. RSI
      iii. RSI – Derivative
      iv. Ichi Moku?
   d. Industry Data (An idea – need to explore further)

3) 3C/Method C – Quantitative Strategies
    a. Just an idea, need to learn some fundamentals before taking it further.