Objective:

Maximize Sharpe Ratio, Given Selection of Stocks, Outlook of Future, and Personal Constraints

Mean Variance Optimizer

[Conceptual Overview]

1. Pick Stocks/ETFs
2. Calculate Historic (Unconstrained) Efficient Frontier
   1. Historic Data
   2. Return Ideal Unconstrained Portfolio Weights
3. Establish Views on Future Outlook – Macro Economic
4. Calculate
   1. Holding Period Returns For Each Stock/ETF Over Relevant Time Frame
   2. Variance of Stock During Relative Time Frame
5. Recalculate Efficient Frontier Based on Future Outlook
   1. Params: [HPR/Ea. , Variance]
   2. Return: Ideal Weights of Projection Portfolio
6. Monte Carlo Simulation
   1. Params: [Historic Portfolio, Projection Portfolio]
   2. Return: Distribution of Returns For Each Portfolio
      1. Probability of Achieving Certain Level of Return on Risk Adjusted Basis.
7. Establish Unique Constraints
   1. Personal Tolerances/Conditions