Whiteboarding: Quant Investments

Before We begin:

* Download conda (https://www.anaconda.com/download/)
* Download IDE
* Create conda venv
  + conda create -n myenv python=3.7
  + conda activate myenv
* Install git on conda (conda install -c anaconda git)
* Create Repo- share repo
* Connect Github
  + Create personal access token from github
  + Go to the git repo shared by JST
  + Git clone <copy the http address>
  + <make it a habit to git pull before you make any changes to codebase and push changes before sign off (you can push as we are not making super complicated codebase)>
* Create Repo Readme markdown

Normal Housekeeping

* Github
* CLI (git, virtual env, conda and pip)
* Jupyter Notebook

Data Analysis (exploratory analysis)

* What is the difference between rate of return of different benchmarks pegged at USD
  + Handle API
  + Data Analysis
  + Pandas, Python, Numpy

Web Development

* On a website (github pages)
  + HTML, CSS, Javascript

Hypothesis Tester

* Object Oriented Programming (Hypothesis, needs to be embedded in a class/object)
* Coding

Algo development

* Machine Learning
* Predictive Modeling

Objective Function-

* Risk
* Liquidity

Mathematical modeling (prescription, based on past data- if you want to develop a new algorithm)

* Sensex, Nifty, S&P500 market indices- Benchmark- Portfolio managers to gain an alpha and manage risk (dual optimization)- Stocks and bonds (share of company, bonds- debt of government- municipal, corporates and banks)- Tbonds- 20 years 30 years,
  + - 100, 4%- 4-4-4-4-4
    - Secondary markets of bonds- cash (be of lesser present value-
    - Short selling, futures, derivatives,
  + APIs- Yahoo, NSE BSE- Data
  + Algorithm development