

## **AlgoLens: Moving forward**

### **AlgoLens**

Visualization software used to track the fund's portfolio and evaluate the efficacy of backtested strategies.

### **Progress**

- The system currently reads tickers from the database and calculates their values to simulate performance metrics for potential backtests.
- Performance metrics and charts can also be generated at the user's discretion, given adequate programming experience.

### **Immediate Missing Features**

- User authentication is in progress but not yet complete.
- Running AlgoLens on the AWS EC2 instance is overloading the server. Insufficient computing power may be the bottleneck, and the server may also lack adequate bandwidth to support requests. AlgoLens needs to be more efficient in this respect.
- Implement filtering by data range.

### **Long-term goals**

1. Center of Documentation:  
New analysts could use AlgoLens to better understand the fund's core system. Documentation on the system's workings should provide a top-down view of how AlgoGators retrieves data, calculates signals, and executes trades. Additional documentation can cover general information about assets, such as futures contracts' metadata.
2. Data Mediator:  
For those that are not tech-savvy, AlgoLens can be a medium for data collection, allowing members to download data from the database with ease (in their format of choice). This will allow for batch downloading and data range filtering. Users may want to download large sums of data at a time which can be a cause for concern if it takes up too much network bandwidth.
3. Data Filtering:  
Filtering for backtests with relevant features such as annualized returns. Macros for filtering data in and around financial crises also are possible (e.g. 2008 crisis, 2020 COVID drawdown).
4. Advanced Backtesting Features:  
Relevant information, specific to a certain strategy can be viewed along with core backtesting metrics (e.g hyper parameters from models). This feature can only be implemented if uploaded during backtesting.

5. ML Driven Insights:

In the interest of the quality of life of the backtester, machine learning models can assist with understanding and explaining possible outliers in data. Large language models can also help with giving a 'TL-DR' of how a strategy performed.

6. Cost Estimation Dashboard: (Admins only)

Cost estimation dashboard to forecast compute expenditures.