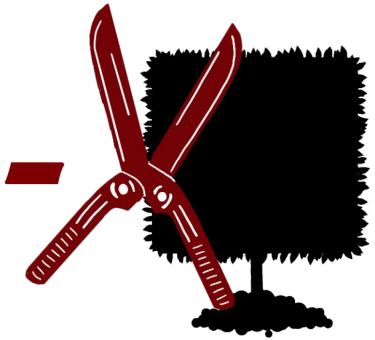
# Trim-



**Cut out the trouble. Start investing.**

Shrey Dudhia, Raniah Jeanlys, Robert Leonhardt,
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# *Our Objective*

# Trim-X Explained

**Objective:**

**Provisioner of simple investing through automated trading.**

- **Executing through two essential elements**
  - **Automated algorithmic trading bot**
  - **Smart contract**

# Important Elements

- The model utilizes three different gauges when picking securities for different risk level baskets. Risk levels are categorized by filtering performance of each security by its: Earnings Per Share, Revenue and Cash Flows. Attempted to keep the fundamentals simple in the sense of capturing the company's profitability for its investors in EPS, company's overall relevance & revenue in its niche market and the company's ability to cover its expenses and debts through cash flows.
    - Risk Tolerance
        - Risk Averse (Conservative)
            - Companies with positive and an increase in EPS, Revenue and Cash flows in the past 3 years(MSFT, AAPL, AMZN, NFLX, GOOGL)
        - Risk Neutral (Moderate)
            - ETFs, Blend of both volatile stocks and long time performers. This pool can have negative revenue as long as their cashflows are positive and increasing.
        - Risk Lover (Aggressive)
            - Short term performers, Highly volatile, where EPS and revenue growth can be compromised but cashflows remain steady.

# *Algorithmic Trading Bot*

# Summary of Our Model

- Aspects within our model for algorithmic trading using the Alpaca API
  - Having the model place a market order
    - Automated trading bot that automatically trades on the entry/exit triggers
  - Check positions before they are closed and then collect the close price data
    - This consisted of standardizing the data then creating a LSTM model
    - Plotted the Real vs Predicted Prices
    - Created a simulation and then eventually tested the model's efficiency
      - Best was 0.656
  - Trading Indicators
    - Moving Average
    - ROC Indicator
    - CMO

# *Smart Contracts*

# Explanation of the Contracts

***The Trim-X Contract***

***The Trim-X contract allows investors / users to purchase tokens that represents a share of a particular portfolio.***

- ***Portfolios are listed as Risk Averse, Risk Neutral, and Risk Lover.***
- ***Each basket of assets is assigned to a specific portfolio.***

***To make our contracts compatible with off-chain data, we implemented the Chainlink contract Integration Process***

- ***Incorporated Oracle to retrieve the current value of ETH and USD***
- ***Integrated Chainlink to compute the value of the token for each of the baskets***
    - ***For Chainlink oracle we need:***
        - ***OracleID:***
        - ***JobID:***
        - ***Link(currency needed for running oracle API calls)***

# *Proof of Transactions*

# *Problems and Questions*

# Issues and Solutions

- We ran into a few issues however, using teamwork we worked through each issue to bring forth  our vision to to this project.
  - Lex or HTML Front End (will expand on it's creation later)
    - Connecting it to the other project elements
  - Smart Contract Issues
    - Getting Link for our account,(customize by chainlink)-- paired keys, headers
    - Coin exchange via Uniswap (ETH -> LINK)--paste the Kovan faucet link into the contract
    - Connecting Chainlink to retrieve real time data for our contracts.
  - ERC 884
    - Difficulty finding the port
    - Syntax Issue

# *HTML Front-End*

Name

Hunter Norris

Age

42

Risk Level

Risk Averse

Investment Amount

4500.00

Submit

Name

Hunter Norris

Age

42

Risk Level

Risk Lover

Investment Amount

4500.00

Submit

# Creation and Implementation

- The Trim-X TradingBot is derived from the seed idea of providing an interface allowing interaction with a TradingBot to provide information for various levels of traders. Services are offered from a range of risk averse to risk lover.
- A thorough analysis of Stock values are performed through machine learning techniques as a strategy to better assess the investors risk levels.
- The Blockchain will list these investment transactions based on the Trim-X TradingBot recommendations.

# Questions & Future Improvements

- Potentially using  ERC 884?
- Upgrade to a Lex or HTML  front end in the future? How would we like to connect it in the future?
- Creating an oracle to access Alpaca accounts
    - We would have had to create an external adapter through Chainlink.  We could not find any clear documentation.
    - The purpose would allow investors to purchase tokens, where each token represents a share of a particular portfolio of assets