

# Release Summary

Product Name: Backtesting Engine, Team Name: Simple Strategies

Date: 12/2/25

## Key user stories and acceptance criteria:

- As a user I want to be able to sign up and login to my simple strategies account
  - **Scenario 1: A new user is able to successfully sign up**
    - Given the user is on the create account page (clicking on login in the home page then clicking create account)
    - When they enter a valid username, email, and password
    - And click “Create Account”
    - Then the system creates a new account
    - And the user is prompted to verify their email and receives a verification code in their email
    - Then the user should be able to input their verification code and be redirected to the profile page
  - **Scenario 2: A returning user is able to successfully login**
    - Given the user has a verified account
    - When they enter valid credentials on the login page
    - Then they are logged in and redirected to their profile
  - **Scenario 3: A returning user inputs a typo and fails to log in**
    - Given the user is on the login page
    - When they enter an incorrect email or password
    - Then an error message appears
    - And the user remains on the login page
- As a user learning more about strategies, I want to be able to visualize the results of a buy-and-hold strategy on a certain stock
  - **Scenario 1: A user is able to successfully run their strategy and see the result**
    - Given the user is on the a strategy page and has selected a strategy
    - When they input a valid stock ticker and date range
    - Then a chart is displayed showing buy-and-hold performance
  - And the total return percentage is displayed at the top
  - **Scenario 2: The user inputs an invalid ticker and tries to run the strategy**
    - Given the user enters an invalid stock ticker
    - At the bottom of the create ui it should say “invalid ticker”

- And no graph is shown
  
- As a user, I want to be able to progress through levels and see my progress on my profile
  - **Scenario 1 : A new user starts learning**
    - A logged in new user navigates to the page for Level 0 by clicking “Learn”
    - The user reaches level 0
    - The user sees the first page of level 0 (“What is a market?”) and then can navigate through the rest of the level, completing activities to test their understanding
    - The user fully progresses through pages in level 0 and successfully completes it
    - They receive a popup message notifying them of their level completion, and then can navigate back to their profile or through level 1
    - Upon completion of level 0 the user should see their level be incremented when going back to their Profile page
    - The user should also be notified of unlocking the buy and hold strategy, the “Create” tab no longer has a lock on it
  - **Scenario 2 : An existing user wants to continue learning**
    - A logged in existing user navigates to level 1 by clicking “Learn”
      - They are automatically taken to level 1 because their progress is saved
    - The user reaches level 1
      - The user sees the first page of level 1 (“What is a strategy?”) and then can navigate through the rest of the level, completing activities to test their understanding
    - The user fully progresses through pages in level 1 and successfully completes it
    - They receive a popup message notifying them of their level completion, and then can navigate back to their profile or through level 2
    - Upon completion of level 1 the user should see their level be incremented on their profile
    - The user should also be notified of unlocking the SMAC strategy, and can view it after clicking the “Create” tab.
    - As a user, I want to run Monte Carlo simulations on my modified strategies so that I can assess their robustness and variability.

- As a user, I want to be able to store my strategies so I can conveniently access them later
  - **Scenario 1: The user is able to successfully save a strategy**
    - Given the user is logged in and on a strategy on the create page
    - After running their strategy, the user is able to input a name for their strategy (optional) and can click the “Save Strategy” button
    - After clicking “Save Strategy”, the user’s strategy is added to the “my strategies” tab
  - **Scenario 2: The user loads a saved strategy**
    - Given the user is logged in and on the create page
    - When they click the “my strategies” button in the top right
    - Then all previously saved strategies are displayed
    - And if they click “load” on a particular strategy
    - Then their saved strategy will be loaded in with all of the saved parameters
- As a user, I want to see related news articles about the stocks and strategies I’m viewing so that I can understand the current market context.
  - **Scenario 1: Display Relevant News on Create Page**
    - Given the user is logged in and on the create page and has entered a valid ticker
    - Then the 5 most recent articles relevant to the ticker as per yFinance are displayed at the bottom on the page
    - If they click on the article, they should be redirected to the article in a new tab
  - **Scenario 2: The user accesses the News Page**
    - Given the user is currently on the News page
    - Then they should see 10 recent news articles from popular tickers as well as the daily stock chart for said stock
    - Then if they click on the article, they should be redirected to the article in a new tab
- As a user, if I want the ability to reset my password in case I forget it
  - **Scenario 1: User is able to successfully reset their password**
    - User clicks on the forgot password in the login pop up
    - User will be sent a email with a code

- The pop up with update to where user can enter a code and they can write down their new password
- As a user, I want to run Monte Carlo simulations on my modified strategies so that I can assess their robustness and variability.
  - **Scenario 1: The user tries running a basic monte carlo simulation**
    - Given the user is logged in and has saved strategies
    - When the user navigates to the Monte Carlo simulation page
    - And selects a saved strategy from the dropdown
    - And configures the simulation parameters (mode, time horizon, number of simulations)
    - And clicks the "Run Simulation" button
    - Then the system validates the strategy is eligible for simulation
    - And then displays a progress indicator while the simulation runs
    - And shows the simulation results including statistics and visualizations
  - **Scenario 2: User encounters an error**
    - When an error occurs (e.g., insufficient data, invalid parameters)
    - Then a clear error message explains the issue
    - And suggests how to resolve it

## Known Problems:

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## Product Backlog:

- Improve the loading speed of lessons from db
- Add a chatbot that can answer questions the user might come across about strategy, stocks, and lessons