

In this task you will use machine learning to predict daily climate events in four major cities.

Start Date: Monday, February 26, 2024.

End Date: Monday, March 25, 11pm, 2024.

Please note: Do not use your personal payment method or real money for this task.

Follow these steps:

Create a demo account at: <https://demo.kalshi.co/>

Transfer a demo of \$9999 into the account in increments of \$500.

Familiarize yourself with the platform by reading the documentation:

<https://demo.kalshi.co/learn>

Week 1: February 26 - March 3: Manual prediction

Execute at least four manual trades daily (Monday through Friday) predicting four daily climate events which are the high temperature in

1. (Belvedere Castle) Central Park, New York
2. Midway International Airport, Chicago, Illinois
3. Bergstrom International Airport, Austin, Texas
4. Miami, Florida

You may perform one or more predictions per day for each city and may make your daily predictions anytime before the market closes.

Week 2: March 4 - 8: Data collection and model training

Identify five different data sources that are useful in predicting your daily climate event.

Write Python scripts to gather historical data from each of these sources.

Use this data to train a machine learning model to predict the daily climate event.

Plot the predicted and ground truth values over time for historic data.

You may extract relevant data in any way that is allowed (for example according to robots.txt allow/disallow text available as the url suffix). Only use data sources that are freely available online and allow gathering the data.

Make daily manual trades based on your model's predictions.

Week 3: March 18 - 25: Automated prediction

Read the API documentation: <https://demo.kalshi.co/api>

Implement automatic daily trades using the API based on your model's predictions between

Sample code: <https://kalshi-public-docs.s3.amazonaws.com/KalshiAPIStarterCode.zip>

<https://github.com/Kalshi/kalshi-python>

<https://github.com/Kalshi/tools-and-analysis>

Example video: <https://www.loom.com/share/c351c9521c6e496ab81e8374571818c0>

You should use your prediction to automatically make decisions.

Submission: Monday, March 25, 11pm, 2024.

Requirements:

Screenshots or logs of your daily trades for weeks 1, 2, and 3, and your account balance.

Python code used for data collection from each data source, model training, daily high temperature prediction, and API-based trading.

Upload a report/Python notebook summarizing your findings from this task here (name the

file as your email prefix)

<https://drive.google.com/drive/u/2/folders/1WaXYCOhH-UCTETLdZCh1bjujLm7wTit>

You may submit a zip file with a summary of your findings that may walk through and describe your dataset collection, methods, results, data, code, models, within a marked up Python notebook or text document. You are evaluated on the methods, technical depth, results, data, code correctness, and readability.

You may use your late days.

Please start new threads under the Common Task tab if you have any questions.

Good luck