

# SmartTrader Console

Welcome to **SmartTrader Console**, a powerful Streamlit application designed to predict stock prices and implement trading strategies for NVDA and NVDQ stocks. This app allows users to predict stock prices for the next 5 business days and determine optimal trading actions (IDLE, BULLISH, BEARISH) to maximize net equity value.

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## Team Members

Name	Email	Student ID
Saurav Kashyap	saaurav@sjsu.edu	018205655
Meet Hitesh Thakkar	meethitesh.thakkar@sjsu.edu	017792476

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## App URL

You can access the deployed app at the following URL:

**SmartTrader Console** - <https://smarttrader-team14-saurav-meet.streamlit.app>

### 1. App Functionality:

- The app predicts stock prices for NVDA and NVDQ for the next 5 business days.
- It implements a trading strategy based on predicted prices:
  - **IDLE**: No action is taken.
  - **BULLISH**: Swaps all NVDQ shares for NVDA shares using NVDA's open price.
  - **BEARISH**: Swaps all NVDA shares for NVDQ shares using NVDQ's open price.

### 2. How to Use the App:

- Select a date using the date picker.
- Click the "Predict" button to view:
  - Predicted stock prices for NVDA.
  - Trading actions for each business day.

### 3. Expected Outputs:

- A table of predicted NVDA stock prices (Open, High, Low, Close).
  - A table of trading actions (IDLE, BULLISH, BEARISH) for each day.
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## Build Instructions

Follow these steps to build and run the app locally:

### Prerequisites

- Python 3.8 or higher installed on your system.
- Required Python libraries: `streamlit`, `yfinance`, `pandas`, `numpy`, `scikit-learn`, `joblib`.

### Steps

1. Clone the repository or download the app code: `git clone https://github.com/hellosaurav5/SmartTrader.g`
2. Install dependencies using pip: `pip install requirements.txt`
3. Run the Streamlit app: `streamlit run app.py`
4. Open your browser and navigate to `http://localhost:8501` to interact with the app.

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## Contact Information

For any queries or issues related to this app, please contact:

- Saurav Kashyap: `saurav@sjsu.edu`
- Meet Hitesh Thakkar: `meethitesh.thakkar@sjsu.edu`