Forecasting Palantir: A Deep Learning Approach to Stock Prediction

Why the task matters

Relevance

- Since stock prediction is a time series of numbers it provides the perfect basis to explode it to models like LSTM's, GRU's, or even transformers
- This projects applies to many course concepts and to a real world high-complexity task
- Being an MBA student and personally invested in the stock market and the Company this seemed to be the perfect fit

Domain Knowledge

- Strong business and finance foundation
- Hands-on exposure to the stock market and profound knowledge of the company and their business model
- Strong Expertise and proven

Data Availability

- Daily historical prices (Open, High, Low, Close, Volume)
- Technical indicators (e.g., 20-day MA, RSI, volatility measures)
- Broader market data (e.g., NASDAQ index trends) for noise/context

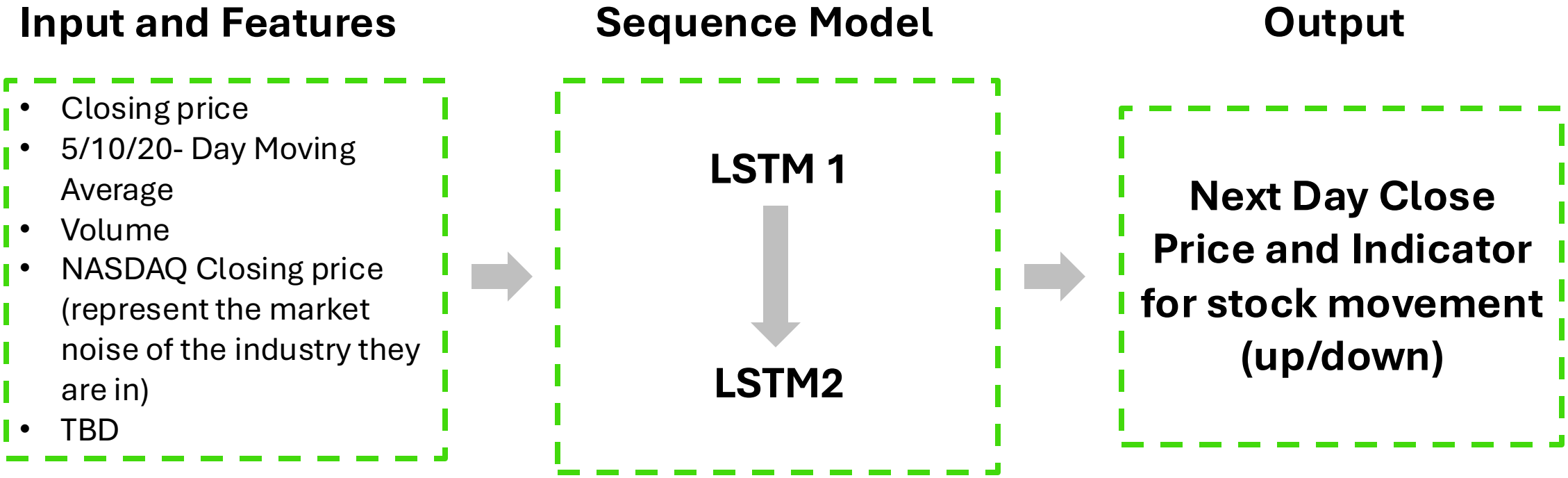
TradingView

yahoo!finance

kaggle

wrds WHARTON RESEARCH DATA SERVICES
The Global Standard for Business Research

High-Level Model Structure



Feasibility and Limitations

Feasibility

- Time-series is clean and structured
- Dataset is widely available
- Built with PyTorch – simple to extend
- Well suited for sequence models

Utility

- The overall goal is to provide a tool that provides two insights:
  - Is the stock stock going to move up or down
  - And the prediction of the price the next day
- Useful for investors or analysts
- Supports experimentation with real forecasting pipelines

Limitations

- Limited by historical data model cannot respect new macro events
- Risk of overfitting to short-term noise or past regimes
- Only uses numerical data (ignores sentiment, fundamentals, and news)