MTH 5000, Lecture 1
Applied Forecasting of Financial Data
Introduction, Expectations, and Course Goals

Yahia Taraf

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Introductions

Lets Break the ice, tell me the following information;

- What is your name?
- What year are you?
- What is your major?
- What are some of your interests or hobbies?

Why did you choose to sign up for this interdependent study?

My Background

A bit about myself and my interests;

- Studying Mathematics and Statistics
- Participate and Design ML & Data Science Club workshops
- Currently interested in studying the modern advancements of Time Series Analysis

Motivation behind this independent Study

This course focuses on time series analysis because it is not only widely used to study patterns, trends, and uncertainty, but it is also a classical staple of Statistics, combining both traditional and modern techniques. The applications to financial data allow us to apply the skills we learn to a large and dynamic industry, which can attract future employers. The goal is for all of you to better understand complex concepts in statistics and machine learning and gain the knowledge to explore new and advanced forecasting methods.

Motivation behind this independent Study

Teaching & Learning Goals

- Help others understand complex ML & Statistics concepts
- Enable peers to apply skills to real-world problems
- Inspire curiosity and encourage further exploration

Course requirements

What will you need to achieve success?

- A Python Compiler
- Knowledge of Basic Probability and Statistics
- Familiarity with Basic Machine Learning Methodology
- Willingness to learn and use that cranium

Course Requirements

- **Flexible scheduling**, meetings and activities may vary week to week.
- **Clear expectations**, you are responsible for staying on track with assignments and progress.
- **Self-motivation is key**, independent work and initiative are essential for success.
- **Active participation**, engagement in discussions, workshops, and exercises is expected.

Course Goals

What is the goal of this independent Study?

- Retrieve and process stock market data using APIs
- Understand and apply fundamental time series concepts
- Create and explore time series visualizations
- Evaluate forecasting performance using appropriate error metrics

Motivation behind this independent Study

Any questions?