# Stochastic Evolution Data

# Stochastic modeling and forecasting of financial time series (S&P 500, Crude Oil, 10Y Treasury, Bitcoin, EUR/USD).

## 📁 Project Structure

## 🚀 Getting Started

1. **\*\*Clone or download\*\*** this repository to your local machine or Google Drive.

2. Ensure you have Python 3.8+ and the required packages:

- `numpy`

- `pandas`

- `matplotlib`

- `scipy`

- `yfinance`

3. Run the scripts in `Python\_Scripts/` to reproduce the analysis.

## 📦 Data

- Datasets are stored in the `Data\_Used/` directory.

- Forecast outputs and plots are saved in `arem\_forecasts/`.

## 📝 Scripts

- Main modeling and forecasting scripts are in `Python\_Scripts/`.

- Each script is documented with usage instructions and expected inputs/outputs.

## 📊 Results

- Forecast results, summary statistics, and plots are in `arem\_forecasts/`.

- Additional analyses are in `w\_k\_estimates/`.

## 🤝 Contributing

Contributions are welcome! Please open issues or submit pull requests.

## 📄 License

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## 📬 Contact

For questions or collaborations, please contact [yparaskevopoulos@comillas.edu].