



Forecasting for
Since 2020
Social Good

Probabilistic Forecasting in Python

Instructors



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Register for free...

01 AUGUST
2024

13.00 – 15.00 London Time

<https://f4sg.org/>





Probabilistic Forecasting in Python

In this 2-hour interactive session, delve into probabilistic forecasting techniques using Python. We will explore how to build and implement probabilistic forecasting models, focusing on best practices and real-world applications. Participants will gain hands-on experience with relevant Python libraries including `sktime` and `tsbootstrap`, enhancing their ability to make reliable and actionable predictions under uncertainty.

Description

This session is structured to provide a comprehensive overview of probabilistic forecasting, combining theoretical insights with practical implementation. The session will consist of two main parts: a presentation followed by a hands-on lab.

Part 1: Presentation (1 hour)

1 Introduction to Probabilistic Forecasting

- Definition and importance of probabilistic forecasting
- Use cases and applications in various domains such as healthcare, retail, and energy

2 Key Concepts and Techniques

- Understanding uncertainty and its role in forecasting
- Overview of probabilistic models and methods

3 Python Libraries for Probabilistic Forecasting

- Introduction to key Python libraries (e.g., `scikit-learn`, `TensorFlow Probability`, `PyMC3`)
- How these libraries facilitate probabilistic forecasting

4 Case Studies and Examples

- Real-world examples showcasing the application of probabilistic forecasting
- Success stories and lessons learned



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Part 2: Hands-on Lab (1 hour)

1 Setting Up the Environment

- Installation and configuration of necessary Python libraries

2 Data Preparation

- Loading and preprocessing datasets for forecasting

3 Building Probabilistic Models

- Step-by-step guide to building a probabilistic forecasting model using Python
- Key functions and methods in Python libraries

4 Model Evaluation and Interpretation

- Evaluating model performance using appropriate metrics
- Interpreting probabilistic forecasts and making data-driven decisions

5 Interactive Q&A and Troubleshooting

- Addressing participants' questions and issues
- Best practices for implementing probabilistic forecasting in Python

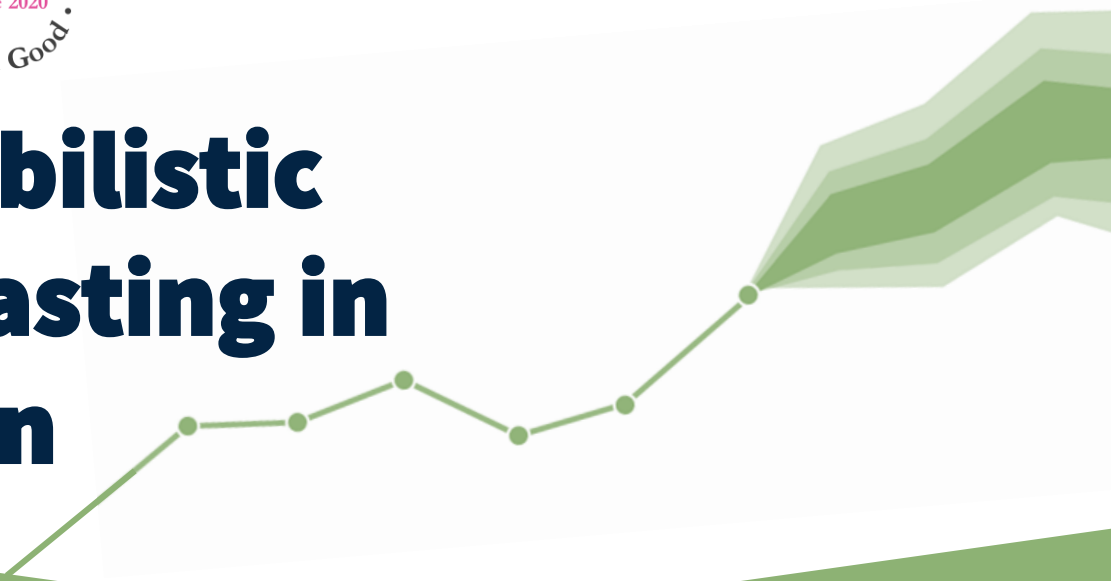
Objective of the training

- 1 Introduce participants to the fundamentals and importance of probabilistic forecasting.
- 2 Provide practical knowledge on using Python for probabilistic forecasting.
- 3 Equip participants with the skills to build, evaluate, and interpret probabilistic forecasting models.



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Prerequisites

- 1 Basic knowledge of Python programming.
- 2 Familiarity with basic statistical and machine learning concepts.

Intended Audience

- 1 Data scientists and analysts looking to enhance their forecasting capabilities.
- 2 Python enthusiasts interested in learning about probabilistic forecasting.
- 3 Professionals in domains such as healthcare, retail, and energy seeking to apply advanced forecasting techniques.

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