

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

AN EXPERT TALK on "Time Series Analysis, Forecasting, and Auto-correlation in High-Dimensional Spaces: Insights for Healthcare and Economics"

The Department of Information Science & Engineering, New Horizon College of Engineering had organized an **Expert Talk** on "**Time Series Analysis, Forecasting, and Auto-correlation in High-Dimensional Spaces: Insights for Healthcare and Economics**" on Wednesday, 26-03-25 in ISE Department, ChhatrapatiShivaji Block, NHCE at 11.00 am.

The brochure of the event:



Fig 1

The Department of Information Science and Engineering at New Horizon College of Engineering organized an expert talk on "Time Series Analysis, Forecasting, and Auto-correlation in High-Dimensional Spaces: Insights for Healthcare and Economics" on 26th March 2025. The event aimed to provide in-depth knowledge and practical applications of time series analysis and forecasting techniques in high-dimensional data, particularly in the fields of healthcare and economics.

Objective of the Talk

The session was designed to:

- Introduce fundamental concepts of time series analysis and forecasting.
- Explore auto-correlation in high-dimensional data.
- Discuss real-world applications in healthcare and economic forecasting.
- Enhance participants' understanding of statistical and machine learning techniques for time series data.

Key Takeaways

- Understanding Time Series Data: The speaker provided an overview of time series data, its characteristics, and challenges associated with high-dimensional datasets.
- **Forecasting Techniques:** Various forecasting methods, including ARIMA, exponential smoothing, and deep learning models such as LSTMs, were discussed.
- **Auto-correlation and Its Significance:** The concept of auto-correlation in high-dimensional spaces was explained, emphasizing its role in identifying patterns and trends in large datasets.
- **Applications in Healthcare and Economics:** The talk highlighted case studies where time series analysis plays a crucial role, such as predicting disease outbreaks, patient monitoring, stock market trends, and economic indicators.
- **Hands-on Demonstrations:** The session included a practical demonstration of time series forecasting using Python and machine learning libraries.

Audience Engagement

The talk was well-received by students, faculty members. A Q&A session followed the presentation, where participants clarified their doubts and discussed further research opportunities in time series forecasting.

The expert talk provided valuable insights into time series analysis, forecasting, and auto-correlation in high-dimensional spaces. It successfully bridged the gap between theoretical knowledge and practical applications in healthcare and economic domains. The session concluded with a vote of thanks to the speaker and organizers.



