

PREDICTIVE ANALYTICS AND MACHINE LEARNING FOR MAINTENANCE

Start Date:	02/02/2026	End Date:	06/02/2026
Categories:	Artificial Intelligence & Er	Venues:	Barcelona
Formats:	In Person	Instructors:	

OVERVIEW

This course covers the fundamentals and practical application of predictive analytics and machine learning (ML) techniques to drive smart maintenance strategies. Focus is placed on reducing unplanned downtime and improving asset performance.

OBJECTIVES

- Learn the basics of predictive analytics and ML in maintenance.
- Collect and preprocess maintenance data effectively.
- Build ML models for failure prediction.
- Identify critical equipment through data analysis.
- Deploy data-driven maintenance scheduling and optimization.

COURSE OUTLINE

- Introduction to Predictive Maintenance
- Data Collection and Cleaning
- ML Algorithms and Feature Engineering
- Model Training, Validation, and Deployment
- Case Studies in Oil & Gas and Heavy Industries

TARGET AUDIENCE

Maintenance planners, reliability engineers, data scientists, and operations analysts.

METHODOLOGY

Coding labs, Python notebooks, maintenance case data, model building exercises.

CONCLUSION

Participants will gain hands-on experience in developing ML-driven maintenance systems.

DAILY AGENDA

Day 1: Predictive Maintenance Basics

Overview of PdM and data-driven decision-making.

Day 2: Data Engineering

Preprocessing and managing time-series maintenance data.

Day 3: Model Development

Training predictive models using ML techniques.

Day 4: Deployment & Monitoring

Integration with maintenance systems and dashboards.

Day 5: Case Projects

Real-world applications and group presentations.

For more information, please contact us:

Email: info@gatewayconsulting.com | Phone: +96522968641

<https://gatewayconsulting.com>