

# Artificial Intelligence for Managers

Course code: MLC\_AIFM

The course is intended for all people who want to understand the principles of machine learning and artificial intelligence without diving into technical details. The goal is to introduce possibilities of machine learning applications in industry and information technologies. Another goal is to prepare tech leads and C-level managers to make competent decisions while implementing exponential technologies.

## Who is the course for

The course is intended for all people who want to understand the principles of machine learning and artificial intelligence without diving into technical details.

## Required skills

None.

## Course outline

- What is machine learning and artificial intelligence
- Difference between artificial intelligence and machine learning
- High-level basics of machine learning
- Most important machine learning tasks
- What cannot be solved by machine learning
- Data-driven company
- Importance of data
- Intuition vs. data
- Exponential advantage
- Bridge between managers and developers
- Machine learning metrics and interpretability
- Training vs. test data sets
- Accuracy, precision, recall, RMSE, MAE, R-Square
- Data outliers
- Data imbalance
- Confidence of ML models
- Explainability of machine learning decisions
- A/B testing and understanding its results
- Traditional A/B testing
- Multi-armed bandits for optimization
- Simultaneous A/B testing of multiple features
- Confidence intervals
- Ethics, safety and security
- Machine learning practical use cases
- Text (classification, sentiment analysis, summarization, reasoning, chat bots)
- Images and video (classification, segmentation, superresolution, denoising)
- Recommendation systems and sorting
- Time series predictions (machine trading, e-commerce)
- Anomaly detection

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