

KNIME for Absolute Beginners

Visual data preparation and introductory machine learning

FA-0739 · 2 days

Data & Analytics

Introduction

Build a first data-analysis workflow with KNIME Analytics Platform. This hands-on introduction is designed for learners with basic computer skills and no prior programming experience.

Work from a simple business question through data preparation and a supplied machine-learning example, learning how to inspect results and recognise the limits of the analysis.

Learning outcomes

- Translate a simple business question into a data-analysis workflow.
- Acquire, inspect, clean and prepare a small dataset.
- Filter, integrate, concatenate and join data in KNIME.
- Use selected discretisation, normalisation and pivot operations.
- Run and evaluate a guided classification or prediction example.
- Recognise selected advanced features and the purpose of supported model interchange.

Prerequisites

- Familiarity with using a personal computer.
- Comfortable using the internet.
- Some basic understanding of File systems.

Training outline

1. Day 1 — Business Questions and Data Preparation

- Introduction to data science, problem comprehension and translating questions into data tasks.
- KNIME workspace, workflow editor, nodes, configuration and execution.
- Acquire and inspect sample data; review columns, data types and missing values.
- Clean data and use appropriate filters.
- Integrate sources, concatenate compatible tables and join on appropriate keys.
- Guided workflow exercise with checks on prepared data.

2. Day 2 — Transformation and Introductory Models

- Discretise or normalise selected fields and reshape data with pivot operations.
- Introduce machine learning, models, classification and prediction.
- Run a supplied beginner model workflow with separate training and evaluation data.
- Inspect evaluation results and explain their limitations.
- Introduce PMML model interchange where the selected nodes support it; check compatibility before reuse.
- Review the end-to-end workflow and selected advanced KNIME capabilities.