Applied Data Science and Machine Learning for Business Users: Using and Interpreting Predictions at Work

Course FAST-05 · 15 hours · Instructor: Wadood Chaudhary · Presented by 7formations

Session 1. How predictions get made (3 hours)

- Rules vs. learned patterns
- Training data, features, labels, in plain terms
- Confidence scores
- Data rules for analysis tools
- **Lab 1: Map a prediction in your own workplace (inputs, output, who acts).**

Session 2. What the numbers mean (3 hours)

- Accuracy, precision, recall
- Costs of false positives vs. false negatives
- Thresholds as business decisions
- **Lab 2: Confusion-matrix card game and threshold memo.**

Session 3. Data quality and fairness (3 hours)

- Garbage in, garbage out, with examples
- Sampling and bias
- Drift: when the world changes
- **Lab 3: Data-quality hunt in fictional clinic dataset.**

Session 4. Forecasts and AI-assisted analysis (3 hours)

- Forecast ranges
- Copilot in Excel and chat-tool analysis
- Manual confirmation
- **Lab 4: Forecast vs. actuals and override decision.**

Session 5. Evaluating models you did not build (3 hours)

- Reading a model card
- Questions for vendors
- Monitoring and escalation
- Capstone presentations
- **Lab 5: Vendor report-card review; capstone memo.**

Worksheets and deliverables

- W1 Prediction map
- W2 Threshold and cost memo
- W3 Data-quality findings
- W4 Forecast override log
- W5 Vendor questions list
- Capstone decision memo

Attendance and completion

- Attendance is recorded at the start and end of every session (live virtual: platform attendance log plus an instructor roll call or poll; in-person: signed sheet).
- A trainee must attend 100% of instructional hours. A missed session may be made up by attending the same session in another scheduled cohort within 30 days; the make-up is logged the same way.
- A trainee must submit every required lab deliverable and score 'Meets' on the final applied task.
- Each completion record is tied to the trainee, the employer FEIN, and the course number, and is kept for the contract retention period.
- Incomplete trainees are not reported as completions and are not billed to anyone. FAST AI pays for completions only; employers and trainees are never charged.
- Optional asynchronous pre-work (under 10% of course time) is supplemental, is not counted as instructional hours, and never substitutes for a live session.

Assessment rubric

Each criterion is scored Not yet / Meets / Strong. Completion requires Meets on every criterion for the final deliverable (resubmission allowed within the course window).

Criterion	Meets standard
Metric interpretation	Correctly ties metric to business cost
Data judgment	Finds 3+ real data problems
Verification	AI finding confirmed by manual calculation
Communication	Plain-language explanation a non-expert understands