FAST-11 Projects: AI-Assisted Analytics and Business Intelligence

FAST-11 AI-Assisted Analytics and Business Intelligence · 7formations · Instructor: Wadood Chaudhary · All examples fictional

Projects use fictional data from the course folder or a sanitized version of a report from your own job (no customer personal information, PHI, or confidential financials; your manager approves the dataset). Scoring: Not yet / Meets / Strong; completion needs Meets on every capstone criterion (one resubmission allowed).

Capstone: AI-Assisted Dashboard and Data Story for a Real Decision

What you produce: a dashboard or report page (4+ visuals) plus a one-page data story, with W1 (transformation log), W2 (question-and-verify log), W4 (fact-check) and W5 (sharing checklist) attached. Presented in 5 minutes in session 5.

Required contents

Part	Content
Decision	Who decides what, by when
Data	Source, rows, period, sensitivity classification; W1 attached
Questions	Three to five reader questions
Verification	At least three AI answers checked by an independent method; mismatches explained (W2)
Dashboard	4+ visuals, each matched to a question, takeaway titles, labeled axes and units, source note
Data story	Answer and action first; three points; uncertainty stated; decision needed; W4 fact-check attached
Sharing	Label, audience, permissions, RLS if needed, refresh (W5)

Rubric

Criterion	Not yet	Meets	Strong
Clean data	Changes not logged or values guessed	Every transformation logged with rows and reason; reproducible	Partner reproduced totals; refreshable query steps
Verified answers	Fewer than three checks, or mismatches unexplained	Three or more independent checks; every mismatch explained	Checks cover a share, a trend, and a filtered count
Visuals	Misleading axes, wrong types, or clutter	4+ visuals fit their questions; titles state takeaways; labels and units	Tested with a reader and revised
Narrative	Any unsupported or overstated claim	Every claim traced to a number or chart; answer first	Uncertainty quantified; method in an appendix
Sharing	Wrong audience, edit for readers, or public link	Label, least-privilege access, RLS where needed	RLS tested with "View as"; Copilot answers tested as a viewer

Weak vs. strong

Weak	Strong
"Scrap is way up and VF-4 is the problem."	"Recommend a VF-4 bearing inspection this week: VF-4 produced 41% of Q3 scrap cost ($6,602 of $16,102), up 15% from July to September. Verified with SUMIFS and a pivot (W2)."
Chart titled "Chart 1" with a y-axis starting at $1,000	Sorted bar chart from zero, titled "VF-4 produced 41% of Q3 scrap cost," source note under it
"Shared with the team."	"Confidential label; agents have Viewer access through the app with an RLS role by agent, tested as two agents; refresh nightly at 2 am, last refresh shown."

Mini project 1: The Mismatch Casebook

Task: Ask 15 plain-language questions of a fictional course dataset (inn bookings, dental schedule, or renewals). Verify at least eight. Write a one-page casebook of every mismatch: question, AI answer, check, cause (wrong column, hidden filter, average of averages, date range, wording), and the prompt or setting that fixed it.

Criterion	Not yet	Meets	Strong
Coverage	Fewer than 8 checks	8+ independent checks	Checks across 3+ question types
Diagnosis	Mismatches noted, not explained	Each cause identified	Fix tested and re-verified
Lesson	None	Three "check first" rules for your team	Rules turned into a one-page team checklist

Example entry: "Q7: 'Average weekend rate in August.' AI: $312. Check (AVERAGEIFS on weekend nights): $289. Cause: AI included Friday as a weekend night. Fix: define weekend as Saturday and Sunday nights in the prompt. Re-verified: $289."

Mini project 2: Chart Makeover Portfolio

Task: Collect three charts (AI-drafted in class, or public charts with no confidential data). For each: the original, the problem (axis, type, clutter, labels, unsupported title), the fixed version, and a one-sentence takeaway title. Add a text alternative for each fixed chart.

Criterion	Not yet	Meets	Strong
Diagnosis	Generic "looks bad"	Specific problems named	References the chart guidance checklist
Fix	Cosmetic only	Type, axis, labels, and title fixed; numbers checked	Highlight color used to focus on the message
Accessibility	None	Text alternative for each chart	Color contrast checked

Example: "Original: 3D pie of 12 months of room-nights. Problem: wrong type for a trend, 3D distortion. Fix: line chart, July peak highlighted. Title: 'Room-nights peaked in July at 1,240.' Text alternative: 'Line chart of monthly room-

nights, May to October 2026, rising from 610 in May to a peak of 1,240 in July and falling to 520 in October.'"