

Module 7

AI-Driven Data Exploration

Uncovering Hidden Stories in Your
Data

Part 1: Blind Exploration

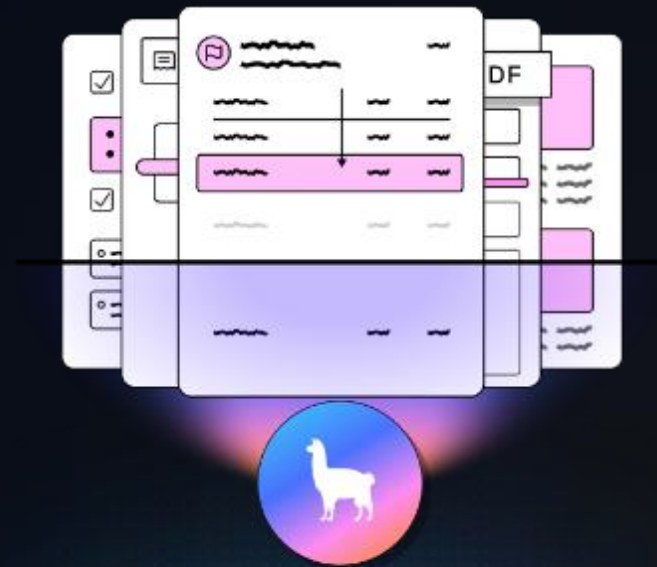
The Art of Asking the Right
Questions

| Metadata First: The Blind Prompt

Exploring without Seeing

Blind exploration involves feeding metadata—column names and data types—into the AI to gauge initial potential before deep analysis.

- ✓ Copy your dataset's schema and sample values.
- ✓ Provide context: "This is a retail dataset."
- ✓ Ask: "What are the three most interesting stories in this data?"
- ✓ Identify relationships between disparate fields.



| Finding Stories in the Metadata



Growth Stories

Identify which product categories or customer segments are showing exponential year-over-year growth trajectories.



Nuanced Patterns

Discover subtle correlations, such as how discount timing affects the purchase volume of premium vs. budget items.



Risk Indicators

Detect anomalies that signal potential churn, supply chain bottlenecks, or fraudulent transaction behaviors early.

Part 2: Statistical Visuals

Seeing the Unseen through AI-Generated
Code

| Density with Histograms

Understanding Spread

AI-generated histograms allow you to visualize the frequency distribution of your numerical data instantly.

By prompting the AI to "create a histogram of order values," you can identify whether your sales are driven by high-volume small orders or rare high-ticket items.

Income dynamics



Financial risks

September ▾

| Box Plots: Hunting Anomalies

Detecting Outliers

Box plots provide a visual summary of the Interquartile Range (IQR). They are the gold standard for identifying extreme data points that could skew your average results.

Behavioral Variance

Compare the purchase variance between different customer tiers. A narrow box shows consistent behavior, while a tall box indicates high unpredictability.

Trend Analysis: Sales Velocity



Prompt: "Visualize monthly purchase velocity to identify seasonal spikes."

| Segmenting Product Behaviors



AI can quickly script comparisons across hundreds of product categories, highlighting high-performance segments in real-time.



Part 3: Hands-on Practice

Retail Dataset Exploration

| Case Study: Retail Behavior

 Retail shopping behavior visualization

Step 1: Use "Blind Exploration" to find the correlation between discount levels and cart abandonment rates.



Step 2: Generate histograms for "Time Spent on Page" vs. "Total Order Value" to find the sweet spot for conversion.



Step 3: Use box plots to identify top 1% of power users and analyze their unique purchase timelines.

Questions?

Mastering AI-Driven Exploration

Ready to discover the three stories in your

data?
www.aischool.com | exploration@course.ai

Image Sources



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