AI use cases, categorized by function and showing key traits for each. This draws from sources like AIMultiple, Gartner's AI Use Case Insights, and the NIST taxonomy used by McGovern's AI Use Case Library.

AI Use Case Table: Categories, Traits, and Examples

Category	Use Case	Primary Trait	Data/Value Sensitivity	Human Involvement	Example
Content Creation	Text/Image/Video Create	Generative	Medium High	Optional	Text-to-image for marketing
Content Synthesis	Summarize, Translate	Abstractive	Medium High	Moderate	Summarizing medical notes
Decision Making	Financial, Strategic	Delegated Authority	High Value	Required except for expert	Buy/sell recommendations
Detection	Threats, Anomalies	Pattern Recognition	High	Notification	Cybersecurity threat detection
Digital Assistance	Chatbots, Smart Agents	Delegated Authority	Medium	Optional	Virtual assistant for scheduling
Discovery	Drug/Material Discovery	Exploratory Delegated Access	High	Expert guided	Protein structure prediction
Image Analysis	Diagnostics, Tagging	Recognition Delegated Access	High	Optional	Radiology image classification
Information Retrieval	Search, Indexing	Semantic Matching Delegated	Low Medium	Optional	Legal document search

Category	Use Case	Primary Trait	Data/Value Sensitivity	Human Involvement	Example
Monitoring	Environmental, System Logs	Temporal Analysis	Medium	Optional + Notification	Wildfire detection via satellite
Payment	Pay for services rec'd	Delegated Authority	High Value	Minimal + Notification	Completes Purchase
Purchase	AI to fulfil travel plans	Delegated Authority	High Value	Goal Driven	Travel itinerary
Performance Improvement	Optimization, Scaling	Efficiency Driven	Low Medium	Goal Driven	Graph analytics for logistics
Personalization	Content, UX, Ads	Behavioral Delegate	Medium High	Goal Driven	Personalized sales content
Prediction	Forecasting Outcomes	Probabilistic Modeling	High	Optional	Sales or weather forecasting
Process Automation	Admin, Workflow Tasks	Rule-Based Automation Delegation	Low Medium	Minimal + Notification	Invoice processing
Robotic Automation	Physical Task Execution	Sensor-Driven Control	Medium High	Minimal	Surgical robots
Vehicular Automation	Autonomous Transport	Real-Time Decisioning	High	Minimal + Notification	Self-driving cars

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Traits Explained

- **Primary Trait**: The dominant AI capability (e.g., generative, predictive, prescriptive)
- **Data Sensitivity**: Indicates privacy, Value and governance concerns
- **Human Involvement**: Ranges from optional to required, depending on ethical oversight

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