

## 1. What's Repeatable in AI Agents or Modeling (Strategy → Tactics)

When you zoom out, every AI agent or modeling initiative has **repeatable layers**:

- **Strategy Layer (Repeatable Concepts)**
  - **Problem Definition:** Define scope (diagnostic → predictive → prescriptive).
  - **Value Lens:** Tie agent/model to measurable KPIs (cost, cycle time, accuracy, adoption).
  - **System Boundary:** Clarify what the agent controls vs. just observes (closed-loop vs. advisory).
  - **Architecture Choices:** Choose between symbolic (rules), statistical (ML), or hybrid (neuro-symbolic).
  - **Scaling Strategy:** Pilot → rollout → orchestration → governance.
- **Tactical Layer (Repeatable Steps)**
  - **Data Acquisition:** Web scraping, APIs, sensors, logs.
  - **Data Structuring:** Cleaning, feature extraction, embeddings.
  - **Modeling Cycle:** Baseline → train → validate → deploy → monitor.
  - **Integration:** Expose via API, dashboard, or workflow automation.
  - **Feedback Loops:** User input, continuous learning, A/B testing.
  - **Ops Practices:** CI/CD for models, monitoring drift, retraining triggers.

👉 The repeatable piece is the **pipeline pattern** — define → collect → structure → model → deploy → refine.

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## 2. Fundamentals of Scripting (Applies to AI + Scraping)

For both AI agents and scraping tools, the **fundamentals** are the same:

1. **Environment Setup:** Install packages, import libraries.
2. **Inputs:** Accept variables (URLs, queries, params).
3. **Process Logic:** Loops, conditionals, function definitions.
4. **Data Handling:** Parse, clean, transform.
5. **Persistence:** Store results (files, DB, Google Sheets).
6. **Error Handling:** Try/except, logging, retries.
7. **Automation:** Scheduling, scaling, modularizing.

👉 Think in **functions** that each do one clear thing — `scrape_page()`, `parse_job()`, `write_to_sheets()`.