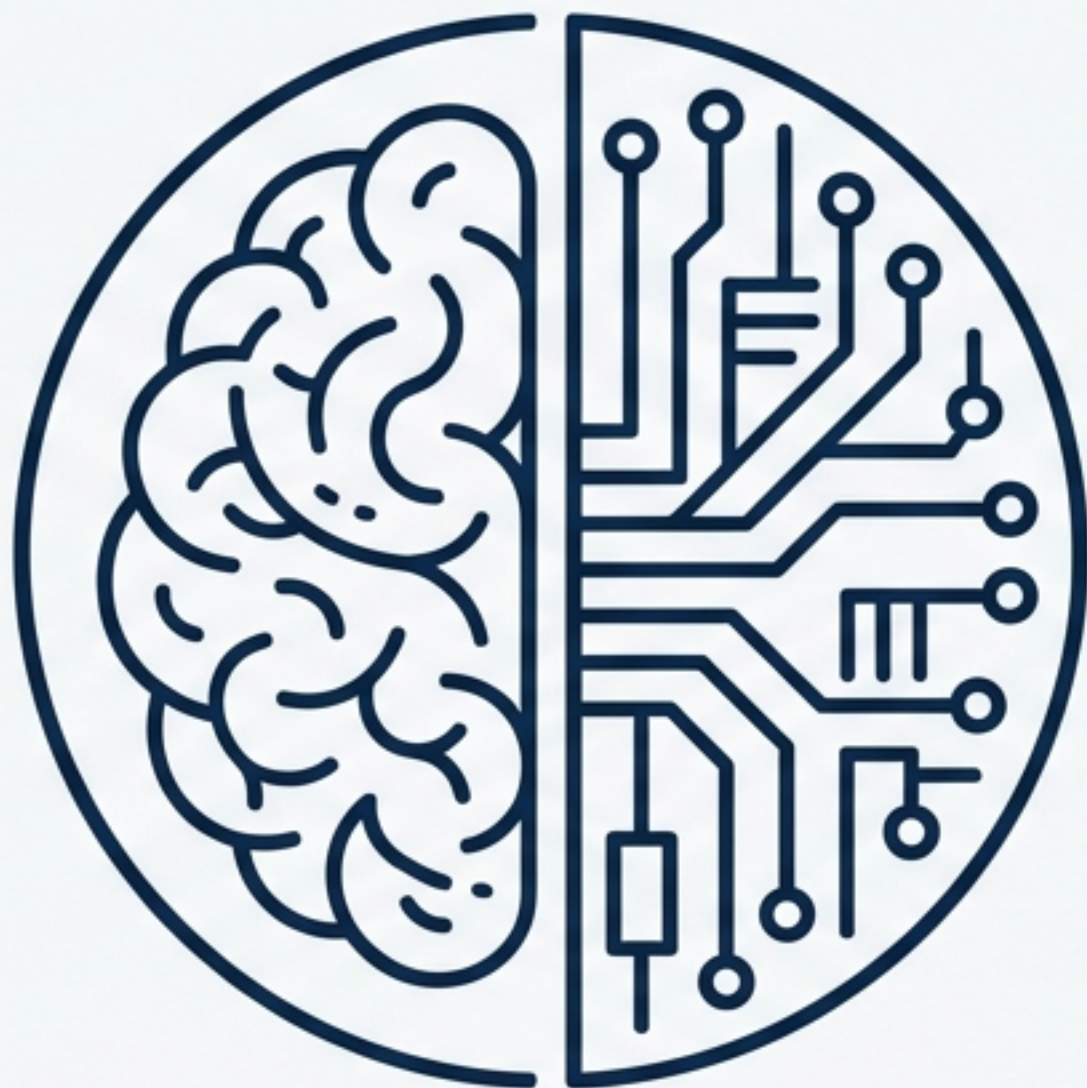




AI FOR THE REDCAP ADMIN: A JUDGMENT-FIRST FRAMEWORK

A Practical Guide to Integrating AI as a Tool, Not an Authority.

YOUR ROLE IS JUDGMENT. AI IS A NEW TOOL IN YOUR KIT.



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As a REDCap administrator, you already apply critical judgment across:

- Security & Compliance
- Data Validation
- System Operations
- User Management
- Regulatory Expectations

THE TOOLKIT: WHERE AI HELPS

Accelerate Documentation and Communication



Drafting Core Documents:
SOPs, job aides,
validation plans.



Generating Test Materials:
Test cases, edge-case
scenarios, UAT scripts.



**Refining Stakeholder
Comms:** System
announcements, project
summaries, clear emails.

THE TOOLKIT: WHERE AI HELPS

A Sounding Board for Technical Challenges



- **Explain Technical Concepts:** Translate cryptic Apache/PHP/MariaDB errors into plain language.
- **Assist with Queries:** Draft and check the logic of SQL or R/tidyverse statements.
- **Structure Troubleshooting:** Work through a problem by asking structured questions (e.g., "Is this a permissions issue? Could this be an event/arm mismatch?").

The First Commandment: Never Paste Real Data



Exposing sensitive information creates unacceptable risk. This includes:

- Protected Health Information (PHI)
- Personally Identifiable Information (PII)
- Study codes or specific dates
- Metadata that could reveal study protocols

THE GUARDRAILS: WHERE AI BECOMES RISKY

AI Is Not an Authority on Your System



- **Don't Let AI Write Production Code:** It cannot validate against your security policies or change control. (e.g., PHP hooks, External Modules, MySQL triggers).
- **Don't Use It for Risk Determinations:** Compliance, security, and privacy decisions require documented human review.
- **Don't Accept 'Hallucinated' Features:** AI often invents non-existent action tags or smart variables.

Protect Core Processes from Automation



AI can help prepare materials, but it **cannot** replace human oversight in:

- **Project Design Reviews:** AI can't conduct a real design consult.
- **User Onboarding & Training:** It lacks the context for user-specific needs.
- **Governance & Approval Steps:** These require human accountability.

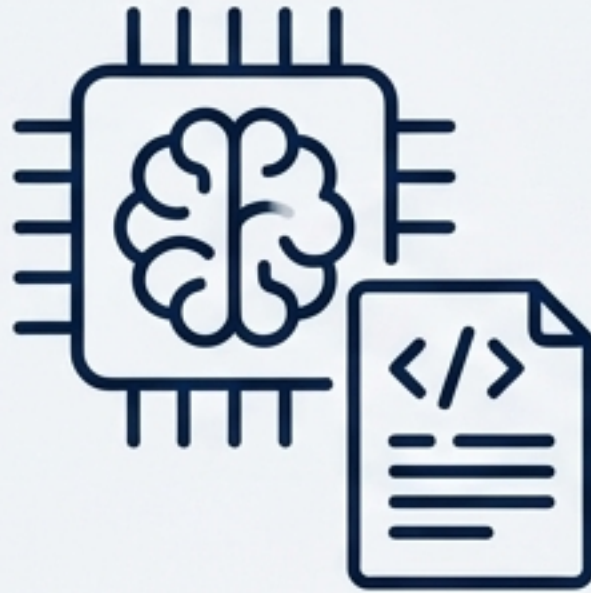
Use Sandboxes and Mock Data to Ask Safely



To get help with a specific problem, recreate the structure **with generic, non-sensitive examples**.

- Use mock participant IDs (`[participant\_1]`, `[participant\_2]`)
- Create placeholder field names (`[field\_a]`, `[score\_b]`)
- Describe dummy configurations (`[event\_1\_arm\_1]`)

Validate Everything. Document Your Judgment.



AI GENERATES



YOU VALIDATE & APPROVE

- **Validate Relentlessly:** Cross-check logic in dev. Run SQL on non-prod DBs. Test sample code in a disposable environment.
- **Maintain Human Accountability:** When using AI output, document what was generated, what you changed, and why you approved the final version.

Use AI to Challenge Your Own Thinking



Instead of asking for a solution, ask AI to find holes in your plan.

- *“What failure modes might I be forgetting for this workflow?”*
- *“What would a new user misunderstand about this instrument’s instructions?”*
- *“What are the potential security concerns with a feature like this?”*

The Framework in Action: Practical REDCap Examples



Action Tags

DO: Ask AI to explain `@HIDDEN-SURVEY` in simple terms.

SQL Fields / Queries

DO: Ask for ideas on how to structure a query.

Branching Logic

DO: Get help outlining survey questions or structure.



Action Tags

DON'T: Assume an AI-invented action tag exists. (Always verify on the REDCap wiki).

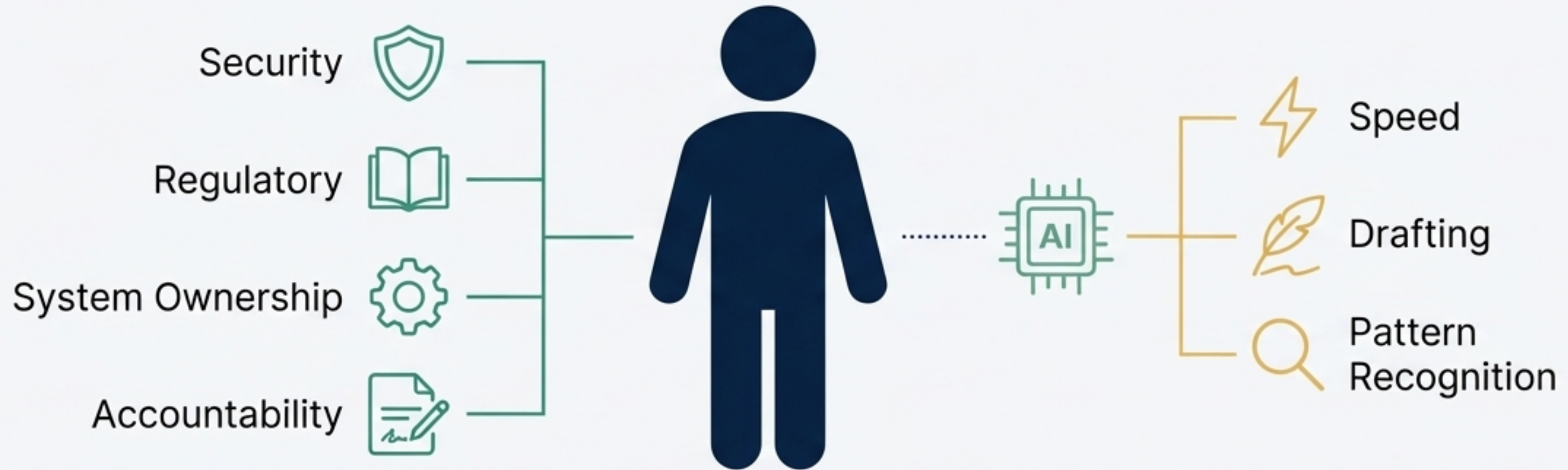
SQL Fields / Queries

DON'T: Run an autogenerated query without testing its performance and logic in dev.

Branching Logic

DON'T: Copy branching logic directly without testing every single path in Preview mode.

YOUR JUDGMENT IS THE ASSET. AI IS THE FORCE MULTIPLIER.



YOU BRING:

- Context & Institutional Memory
- Security & Regulatory Obligations
- Technical Judgment & System Ownership
- Accountability

AI BRINGS:

- Speed & Scale
- Drafting & Pattern Recognition
- Alternative Viewpoints
- Idea Generation

Integrate the two, but always keep the final say.