



Suhas Bhairav

AI Experiment Design Checklist

**A practical, step-by-step guide for product teams
to run small AI experiments.**

A practical framework to design, run, and learn from
AI experiments in product.

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Hypotheses and Scope

Define the customer problem the AI will address in product. Make the hypothesis testable, specific, and time-bound.

Key move Secure data access and ethics approvals before any live test.

PRACTICAL CHECKLIST

- 01 Example: AI-assisted onboarding chat reduces trial drop-off.
- 02 Form a falsifiable hypothesis linking the problem to an AI intervention.
- 03 Identify target users, contexts, and realistic usage scenarios.
- 04 Define success metrics with leading and lagging indicators.
- 05 List data sources, tools, and access requirements.
- 06 Assign owners, approvals, and a clear rollout timeline.
- 07 Set guardrails for privacy, safety, bias, and rollback.

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Experiment Rollout and Metrics

Start small with a single feature and a representative user group. Track metrics continuously and review results weekly to decide next steps.

Key move Keep an explicit rollback option if results disappoint.

PRACTICAL CHECKLIST

- 01** Limit the AI intervention to one feature per iteration.
- 02** Run each cycle for a defined short window (1–2 weeks).
- 03** Capture both quantitative metrics and qualitative user feedback.
- 04** Automate data collection where possible while respecting privacy.
- 05** Establish interpretation rules for signals that trigger decisions.
- 06** Define go/no-go criteria and a rollback plan.
- 07** Document experiment state, outcomes, and learnings for the playbook.

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Decision, Guardrails, and Scale

After each iteration, compare outcomes against predefined metrics and guardrails. Decide whether to expand, refine, or sunset the experiment.

Key move Document outcomes and update the playbook after each cycle.

PRACTICAL CHECKLIST

- 01** Assign a product owner and cross-functional decision board.
- 02** Keep automation of data capture and metrics calculation; require human review for interpretation.
- 03** Document data provenance, privacy rules, and acceptable usage boundaries.
- 04** Schedule periodic guardrail reviews for bias, safety, and compliance.
- 05** Create a clear ownership map for follow-up work and rollouts.
- 06** Record post-mortems and capture lessons in a reusable playbook.
- 07** Decide next steps: broader rollout, iteration, or project termination.

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ABOUT THE CREATOR

Suhas Bhairav

I build AI systems that combine distributed architecture, retrieval, knowledge graphs, security, and practical workflow design. My focus is AI that can be used repeatedly by real teams: understandable, reliable, and grounded in the work people already do.

EXPERTISE

- Principal systems architecture and applied AI engineering
- Production-grade AI systems, agentic workflows, RAG, and knowledge graphs
- Full-stack workflow applications across AWS, Google Cloud, Azure, on-premise, and hybrid environments
- Practical AI implementation patterns for automotive, manufacturing, finance, logistics, cybersecurity, sales, and customer operations
- Security, governance, observability, approvals, and failure-mode thinking for operational AI systems

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