

# GenAI as *(your very own)* PhD Assistant

Henrique Diogo Silva

IAMOT 2026 - PhD Colloquium

CREATING A FULFILLING  
AND SUSTAINABLE FUTURE  
THROUGH IMPACTFUL  
**SCIENCE, TECHNOLOGY  
AND INNOVATION.**



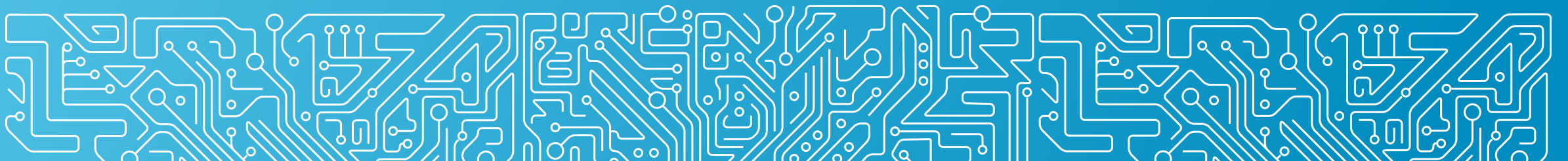
# Henrique Diogo Silva

Area Manager and Researcher at INESC TEC

Focus on Information Systems, Architectures and Data Management

[henrique.d.silva@inesctec.pt](mailto:henrique.d.silva@inesctec.pt)

[hdsilva.pt](http://hdsilva.pt)



# The Agenda

- From Text Generator to Agentic Research Partner;
- Four Agentic Workflows for your PhD Work;
- Curated Tools & Skills;
- Wrapping-up.



INESC TEC

# From Text Generator to Agentic Research Partner

**"This is the difference between Data and a large language model, at least the ones operating right now. Data created art because he wanted to grow. He wanted to become something. He wanted to understand. Art is the means by which we become what we want to be. [...]"**

**The most important change made by an artistic endeavor is the change it makes in you. The most important emotions are the ones you feel when writing that story and holding the completed work. I don't care if the AI can create something that is better than what we can create, because it cannot be changed by that creation.**

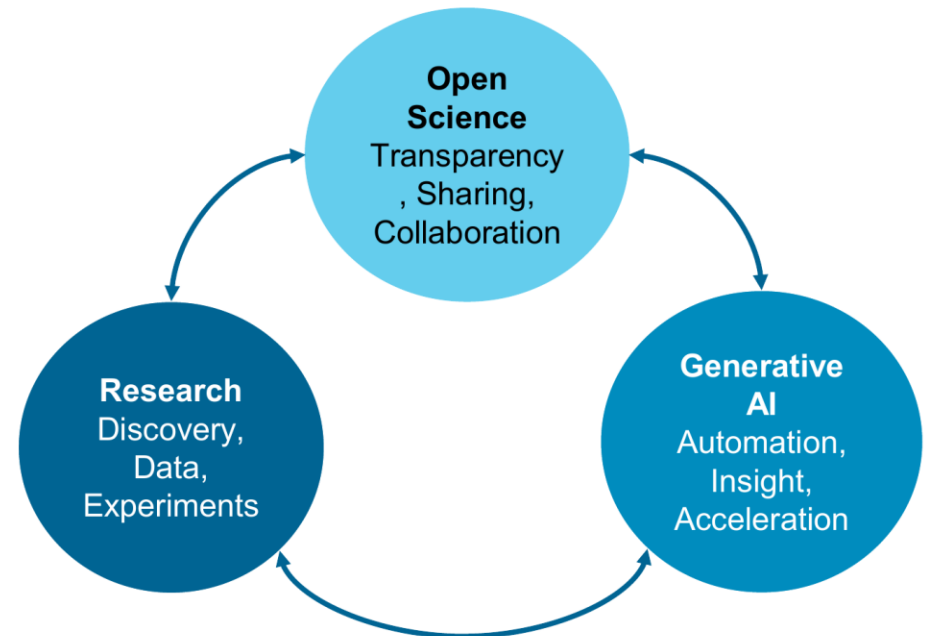
**- Brandon Sanderson**

# Introduction

The landscape of academic research is **rapidly evolving**. With increasing competition and standards for methodological rigor that seem to climb higher every year, Generative AI presents a critical opportunity: it is **not just about keeping up, but about surviving the PhD process with your enthusiasm intact**.

In this workshop we'll focus on the use of Generative AI in research, specifically for the arduous and often tumultuous PhD process.

We will explore how these tools can serve as an agentic research assistant, going **from text generators, to structured conversational partners for critiquing, verifying, and revising**.



# Treat AI as a thinking partner, not a prose vending machine

## Weak use

### Ask for text

The model becomes a fast drafting tool, but we often accept first answers too quickly.

### Hide the real decision

The actual bottleneck stays fuzzy, so the output looks fluent without solving the real problem.

### Lose ownership

You, as researcher risk outsourcing judgment, authorship, and methodological responsibility.

## Strong agentic use

### Question and compare

Use the assistant to surface assumptions, propose, options, and clarify trade-offs before deciding.

### Challenge and verify

Push the dialogue forward with critique and then verify claims, sources, and interpretations.

### Revise with intent

Keep only the changes that improve the argument and still belong to you.

# Treat AI as a thinking partner, not a prose vending machine

## Weak use

### Ask for text

The model becomes a fast drafting tool, but we often accept first answers too quickly.

### Hide the real decision

The actual bottleneck stays fuzzy, so the output looks fluent without solving the real problem.

### Lose ownership

You, as researcher risk outsourcing judgment, authorship, and methodological responsibility.

## Strong agentic use

### Question and compare

Use the assistant to surface assumptions, propose, options, and clarify trade-offs before deciding.

### Challenge and verify

Push the dialogue forward with critique and then verify claims, sources, and interpretations.

### Revise with intent

Keep only the changes that improve the argument and still belong to you.

The value is in the loop:  
Propose → Critique → Verify → Revise.

# Choosing the Right Tool for the Job

## Idea Generation

ChatGPT, Gemini, Miro  
AI

(Brainstorm, refine  
questions)

## Starting Your Research

Consensus, Elicit,  
Scopus AI

(Find papers, get  
overviews)

## Deep Exploration

Scite Assistant,  
ResearchRabbit

(Verify claims, map  
connections)

## Quick Answers and Learning

Perplexity Academic,  
NotebookLM

(Understand concepts,  
synthesize)

## Foundational Models (ChatGPT, Claude, Gemini):

- Training data has cutoff dates
- Can hallucinate citations
- Good for: brainstorming, explaining, drafting
- Bad for: literature search, factual claims

# Why Different Tools Give Different Results: The Architecture Matters

- GPT-\* (Perplexity, Scopus AI):
  - Trained on web data up to [cutoff date]
  - **Strength:** Broad knowledge, strong reasoning
  - **Weakness:** Can confidently hallucinate citations
- Semantic Scholar API (Elicit, Consensus):
  - Retrieves from actual paper database
  - Uses embeddings to find semantic similarity
  - **Strength:** Real papers only
  - **Weakness:** May miss relevant work with different terminology
- Citation Network Analysis (ResearchRabbit, Scite):
  - Analyzes citation graphs, not just text
  - **Strength:** Discovers non-obvious connections
  - **Weakness:** Biased toward highly-cited work

# Picking a Model

First, you need to identify the foundational model of your AI tool.

ChatGPT, Claude, and Gemini offer multiple models with different strengths:

- **Fast models:** Quick, casual chat (e.g., Claude Sonnet, GPT-Instant, Gemini Flash)
- **Powerful models:** Best for serious work like writing, coding, research (Claude Opus, GPT-Thinking, Gemini Pro)
- **Ultra-powerful models:** Solve complex problems; may take longer to respond (GPT-Pro)
- Most platforms default to FAST models to save computing power. You **MUST** manually switch to powerful models for serious research work! (Pay attention to the limits of your accounts...)
- **Privacy:** Claude doesn't use your data for training; ChatGPT and Gemini may, unless training is disabled.

# The Power Behind the Tools

Give the tool more context for a better result, but...

## Myths that (mostly) do not matter:

- Being polite vs. demanding (no consistent difference)
- Using "step-by-step" (helps slightly, not magic)
- Complex formatting with special characters

## What actually matters:

CONTEXT: Upload documents, provide background

- "Summarize research on X"
- "Summarize research on X. I'm writing a dissertation on Y."

**Stop worrying about perfect prompts. Focus on providing context and iterating.**

# The Power Behind the Tools

## Stop Using AI Like Google!

### TYPICAL APPROACH (WRONG):

- Oblivious user: "Find papers on sleep and academic performance"
- AI: [Gives 5 papers]
- User: "Thanks!" [Ends conversation]

### Expert Approach (Right):

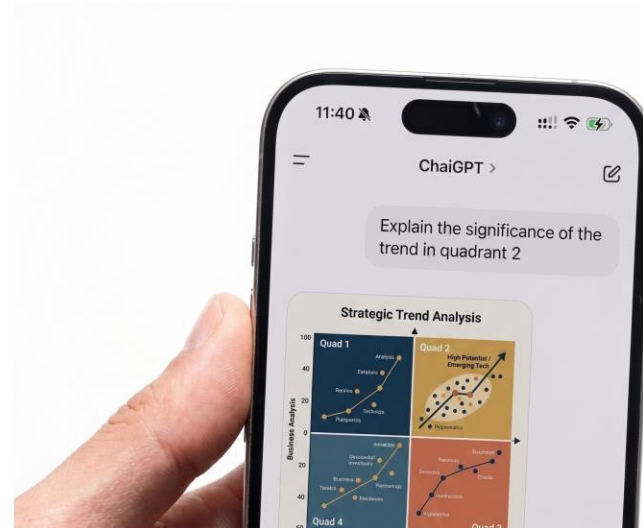
- You: "Find papers on sleep and academic performance"
- AI: [Gives 5 papers]
- You: "The Smith 2020 paper contradicts others. Explain why."
- AI: [Explains]
- You: "Give me 20 MORE options, focus on longitudinal studies."
- AI: [Expands search]
- You: "Now rank these by methodological rigor."

**AI doesn't get tired.  
Question it aggressively.  
The quality gap between  
one-query and iterative  
uses is MASSIVE**

# The Power Behind the Tools

## AI has eyes and ears!

- Equation Solving
  - Point camera at complex equation in paper
  - "Walk me through solving this step-by-step"
- Figure Interpretation
  - Point at graph/chart in article
  - "Explain the significance of the trend in quadrant 2"
- Document Scanning
  - Point at physical printed paper
  - "Summarize the methodology section"
- Whiteboard Collaboration
  - Share screen of your concept map
  - "What connections am I missing?"
- Orientation Meeting Summarization
  - Upload recording of orientation meeting
  - "Transcribe this for me"
  - "What am I suppose to be doing, again?"



# The Power Behind the Tools

## Branching to Explore Alternatives

### Branching is a super power!

Starting prompt: "Does sleep deprivation affect academic performance?"

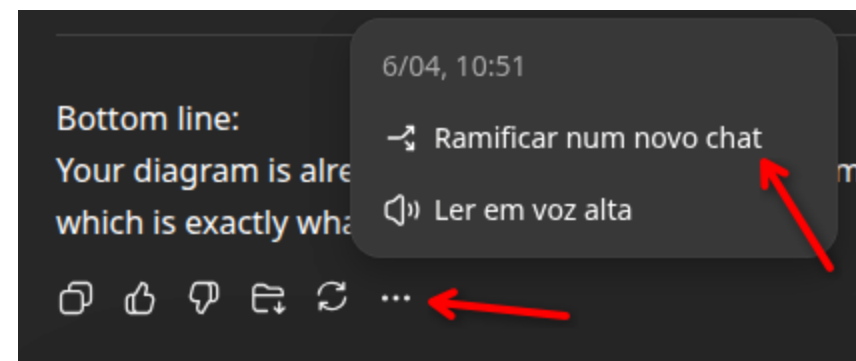
BRANCH 1: Edit to "Focus only on college students"

BRANCH 2: Edit to "Show longitudinal studies only"

BRANCH 3: Edit to "Find contradicting evidence"

BRANCH 4: Edit to "Include papers from developing countries"

Compare all 4 branches → See what different framings reveal



# The Power Behind the Tools Make AI Models Argue

Step 1: Ask ChatGPT your research question

Step 2: Copy Chat GPT's entire response

Step 3: Paste into Claude with this prompt:

- "ChatGPT gave me this answer: [paste]"
- "Do you agree? What did it miss or get wrong?"

Step 4: Copy Claude's critique back to Chat GPT

Step 5: Ask ChatGPT: "Claude critiqued your answer. Respond."

Step 6: Run out of tokens...

May require 2 subscriptions  
Worth it for dissertation-  
level  
research

# (Some) Tools

## Foundation Models

General-purpose AI that can be accessed directly



## RAG-Based Research Tools

Specialized tools that search and retrieve academic content



# (Some) Tools

## Gemini

Linked with Google, it provides strong factual grounding. It handles text, images, code, and even video in one model, which is great for visual data or technical projects.

## NotebookLM

Google's AI-powered research and note-taking tool that helps organize information, generate summaries, and gain insights from documents and sources.

## Wordtune

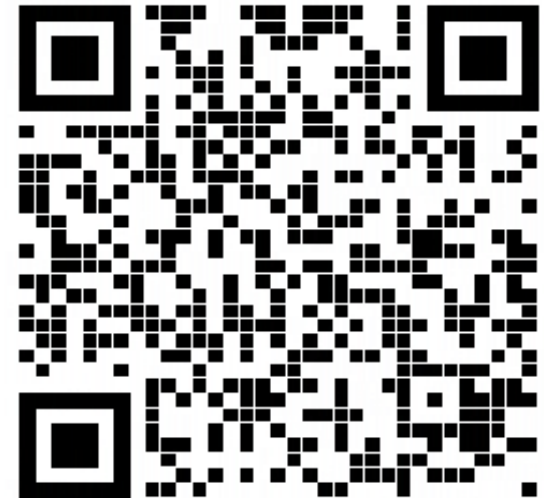
An AI-powered writing assistant that helps you rephrase, refine, and improve sentences for clarity, tone, and style.

## Obsidian with AI plugins

Smart note-taking and personal knowledge management.

## Grammarly

Grammarly's core is built on NLP, which allows it to understand the structure and meaning of text - not just check spelling.



# (Some) Tools

## Coding Tools

AI agents that can read, analyze, and modify files on your computer - without uploading them to the cloud.



# Coding Tools: AI That Works With Your Files

## What is Claude Code or ChatGPT Codex?

AI agents that can read, analyze, and modify files on your computer - without uploading them to the cloud.

## Why it matters for research:

### Traditional AI Chat

Copy-paste your notes into chat

Output stays in the chat

One task at a time

Cloud-based only

### Claude Code

AI reads your files directly

AI can edit your actual documents

Chains multiple steps autonomously

Works with local files

## Works with:

- Obsidian, Notion (exported), Logseq, plain Markdown
- Your literature notes, research journals, meeting notes
- Any folder structure you already use

# Coding Tools: AI That Works With Your Files

I need to add a new concept note for the NIS2 Directive.  
Give me a full overview of its purpose, application and trajectory.  
I want it to be concise but complete at the same time.

10:34:56

Using `obsidian-markdown` for the note format and links, then I'll inspect the vault for related notes and gather authoritative NIS2 sources so the note is accurate and current.

10:35:10 • 21s

I found only a couple of related cybersecurity references, so I'm checking the vault structure and collaboration norms before drafting the note and linking it into the right concept area.

10:35:19 • 6.5s

The vault already has a dedicated concepts area in `80-resources/93-concepts`, so I'm aligning the new note with that template and the existing style before writing it.

10:35:27 • 9.8s

I have the note pattern now. Next I'm pulling current NIS2 facts from primary EU sources so the timeline and scope reflect the actual directive and its implementation dates.

10:35:36 • 3.6s

I've got the core EU sources and the current Portugal transposition status. Now I'm mapping the note to existing vault concepts so it links cleanly instead of becoming an isolated summary.

10:36:02 • 31s

# Coding Tools: AI That Works With Your Files

Read the attached PDF in the @20-reviews/JETM - Motivational Architectures As Governance Logics In Sustainability-Oriented Digital Platforms.md note and complete the summary section with a quick summary of the paper.

Make sure to include the main sections of the paper: problem, research questions, methods, main results, future research.

9:55:32

I'm using the `obsidian-markdown` skill here since this is an Obsidian note update. First I'll inspect the review note, linked PDF, and any vault-specific instructions.

9:56:01 • 30s

I found the target note. Next I'm loading the vault norms and extracting text from the attached PDF so I can write a concise, sectioned summary.

9:56:06 • 5.5s

I've got the PDF path. Now I'm extracting the paper text and scanning the vault for obvious related notes I can link from the summary.

9:56:14 • 8.0s

I've got the paper text and some likely links. Next I'm pulling the specific sections—questions, methods, findings, and conclusion—from the PDF for an accurate summary.



# Four Agentic Workflows for your PhD Work

# Workflow 1: Sharpen the question before it hardens into a weak project

**Role:** Critical Colleague

- **Common problem:** broad topic, fuzzy scope, unstated assumptions, unclear contribution.
- **Useful dialogue moves:**
  - "What is vague, too broad, or assumed here?"
  - "Give me three stronger reformulations and their trade-offs."
  - "Which version is most feasible given my access, methods, and timeline?"
- **Agentic loop:** propose → assistant probes and reframes → compare trade-offs → revise → check feasibility against constraints.
- **Expected output:** a narrower, defensible research question with an articulated contribution.
- **Key rule:** the assistant does not pick the topic. It helps you see sharper options.

# Workflow 2: Map the literature before you trust any claim

**Role:** Literature Scout

- **Common problem:** overwhelm, unknown adjacent fields, contested claims, citation blind spots.
- **Useful dialogue moves:**
  - "Which adjacent literatures or alternative framings am I missing?"
  - "Which claims here need stronger evidence or look contested?"
  - "Propose a search strategy and flag anything you are uncertain about."
- **Agentic loop:** topic → scout suggests subtopics and adjacencies → triangulate with source-grounded tools → shortlist for close reading → verify manually.
- **Tool pairings:** Consensus / Elicit for discovery · ResearchRabbit for citation networks · scite for contradiction checks · Zotero for evidence management.
- **Expected output:** a curated shortlist for deep reading, plus a reusable search strategy.
- **Key rule:** the scout plans the search: you do the reading.

# Workflow 3: Stress-test the method before you commit to it

**Role:** Skeptical Reviewer

- **Common problem:** weak baselines, hidden validity threats, unclear logic from question to method, reviewer landmines.
- **Useful dialogue moves:**
  - "What could make this study fail?"
  - "Which reviewer objections are most plausible here?"
  - "Rank the issues by severity and tell me what to fix first."
- **Agentic loop:** explain the design step by step → assistant attacks it → revise → re-attack → take surviving concerns to the supervisor.
- **Expected output:** a stronger methods paragraph, a prioritized risk list, and a set of supervisor-ready questions.
- **Key rule:** argument quality before prose quality. Use critique before polish. (*This is where "writing support" actually lives: making the argument defensible first.*)

# Workflow 4: Plan the next move, not just the next prompt

**Role:** Project Orchestrator (*replaces the old "writing support" workflow*)

- **Common problem:** mid-PhD drift, stalled progress, unclear next milestone, unfocused supervisor meetings.
- **Useful dialogue moves:**
  - "Given this state, what is my real bottleneck?"
  - "What should I decide alone, and what must go to my supervisor?"
  - "Break the next four to six weeks into defensible milestones."
- **Agentic loop:** dump current state → assistant reconstructs stage and bottlenecks → propose milestone plan → separate self-work from supervisor-work → commit to the smallest useful next action.
- **Expected output:** a realistic milestone plan and a focused supervisor agenda.
- **Key rule:** treat the PhD as a project, not a pile of tasks, and keep the supervisor in the loop.

CREATING A FULFILLING  
AND SUSTAINABLE FUTURE  
THROUGH IMPACTFUL  
**SCIENCE, TECHNOLOGY  
AND INNOVATION.**

# Curated Tools & Skills

I'M CREATING  
A FULFILLING AND  
SUSTAINABLE FUTURE  
THROUGH IMPACTFUL  
**SCIENCE, TECHNOLOGY  
AND INNOVATION.**

CREATING  
A FULFILLING AND  
SUSTAINABLE FUTURE  
THROUGH IMPACTFUL  
**SCIENCE, TECHNOLOGY  
AND INNOVATION.**

# Prompt Pattern 1 - Critical Colleague

Use this when refining a research question, contribution, or early framing.

- Best for early-stage thinking and idea-bouncing.
- Good first step before discussing the topic with a supervisor.

I want you to act as a critical but constructive research colleague.

Context:

- Topic: [insert topic]
- Current research question or idea: [insert text]
- Constraints: [discipline, methods, data access, timeframe, supervisor expectations]

Your task:

- Identify what is vague, too broad, under-justified, or implicitly assumed.
- Ask me 5 sharp questions that would help improve the idea.
- Suggest 3 stronger alternative formulations of the research question or contribution.
- Point out the main trade-offs between these alternatives.
- Do not write the final answer for me. Help me think.

Be direct, skeptical, and concise. If something is weak, say so clearly.

# Prompt Pattern 2 - Skeptical Reviewer

Use this when stress-testing a methods section, argument, abstract, or claimed contribution.

- Best for methodology critique and pre-submission stress testing.
- Useful when participants need to bounce ideas off a demanding interlocutor before committing to a design.

I want you to act as a skeptical but fair peer reviewer.

Context:

- Paper/study paragraph: [paste text]
- Claimed contribution: [insert text]
- Intended audience or venue: [insert venue, field, or type of paper]

Your task:

- Identify the strongest likely criticisms a reviewer could raise.
- Point out unclear logic, unsupported claims, missing baselines, validity threats, or overclaiming.
- Tell me what evidence or clarification would be needed to defend this text.
- Rank the issues by severity: critical, important, minor.
- End with 3 specific questions I should answer before I move forward.

Do not be polite for the sake of politeness. Be rigorous and specific.

# Prompt Pattern 3 - Literature Scout

Use this when exploring a topic, identifying adjacent literatures, or planning a search strategy before deep reading.

Best used together with source-grounded tools such as Consensus, Elicit, ResearchRabbit, scite, or a reference manager such as Zotero.

- Strong for widening the search space before narrowing it through verification and close reading.

I want you to act as a literature scout and research mapping assistant.

Context:

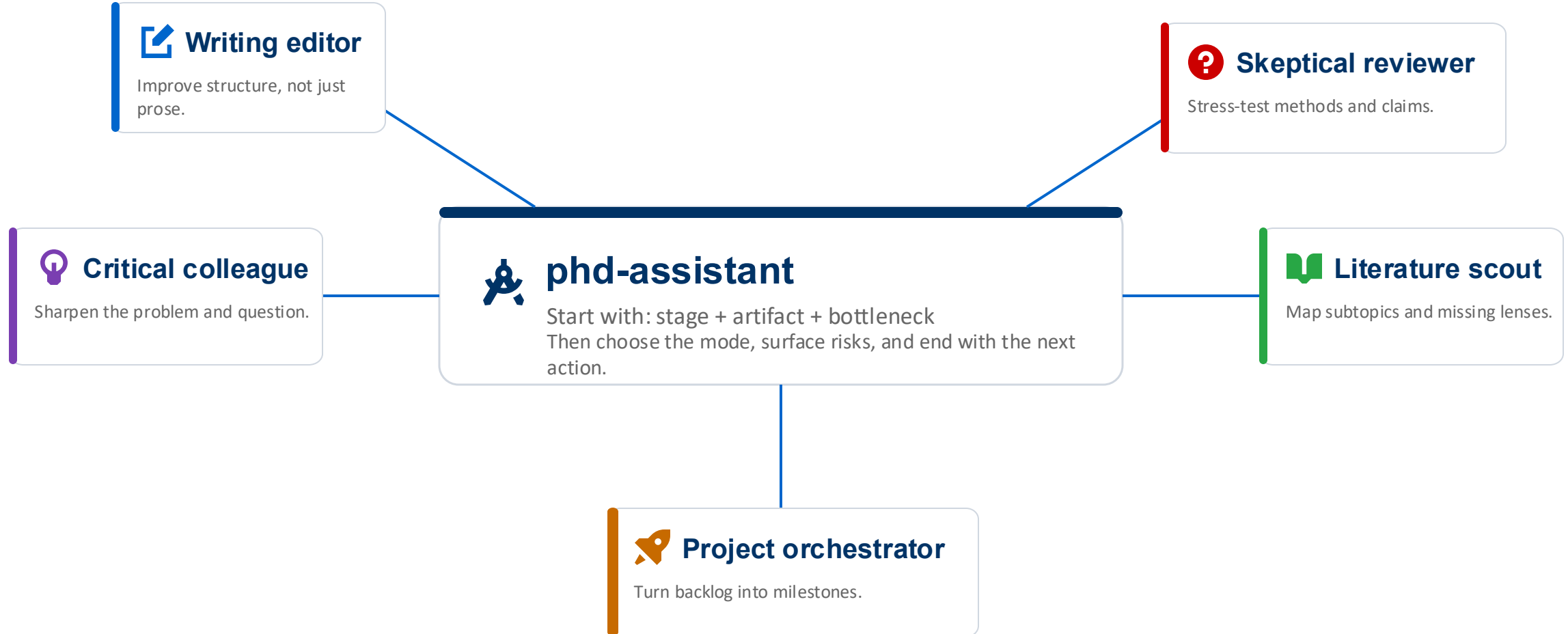
- Topic or question: [insert topic]
- Field or disciplinary lens: [insert field]
- What I already know: [insert known concepts, authors, or papers]

Your task:

- Suggest the main subtopics or conversations I should examine.
- Identify adjacent literatures or alternative framings I may be missing.
- Propose a search strategy: keywords, keyword combinations, and filters.
- Suggest what kinds of evidence or disagreement I should look for.
- If you mention papers, authors, or journals, clearly separate:
  - items you are confident about
  - items that should be treated as tentative and verified independently

Do not pretend to know the literature if you are uncertain. Help me plan the search and inspection process.

# Your new best friend: phd-assistant



# Your new best friend: **phd-assistant**

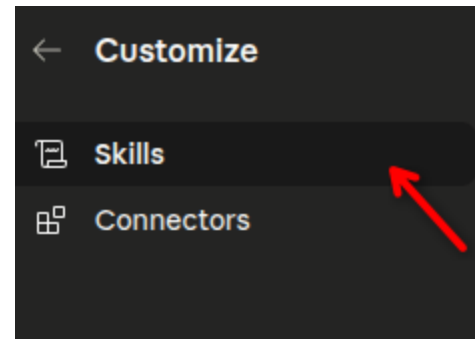
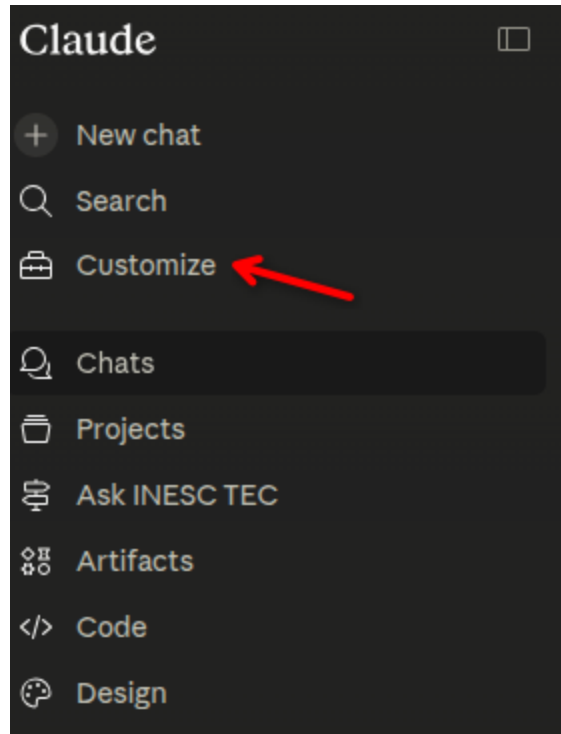
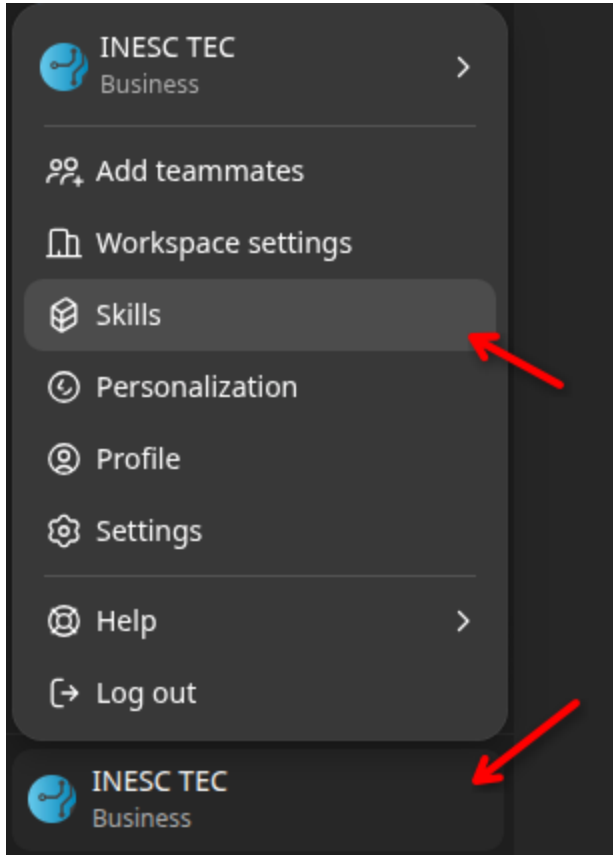


## phd-assistant

Start with: stage + artifact + bottleneck  
Then choose the mode, surface risks, and end with the next action.



# Your new best friend: **phd-assistant**



# How to Use the phd-assistant Skill Effectively

The skill is most useful when used to structure the conversation.

- Start every interaction by naming three things: **current PhD stage, current artifact, and immediate decision or bottleneck**.
- Add only the **constraints that matter for the task**: discipline, thesis format, methods, data access, ethics limits, deadline, or supervisor expectations.
- Pick the **support mode** explicitly: Critical colleague, Literature scout, Skeptical reviewer, Project orchestrator, or Writing editor.
- Ask for diagnosis, questions, options, or a next-step plan before asking for rewriting.
- Use the skill to prepare for supervision as well as writing: for example, ask **what should be clarified before a supervisor meeting**, what risks need discussion, or what decisions are still open.
- Treat any claims about papers, methods, or disciplinary conventions as verification-sensitive.
- End by asking for the smallest useful next action, and what should be taken back to the supervisor rather than decided by the assistant alone.

# Example 1: Narrowing a research question

Use the phd-assistant skill.

Current PhD stage: early problem framing / proposal preparation

Current artifact: draft research question and a one-paragraph problem statement

Immediate bottleneck: my topic feels too broad and I am not sure what the real unit of analysis should be

Support mode: Critical colleague

Relevant constraints:

- Discipline/domain: information systems
- Thesis format: paper-based thesis
- Methods orientation: design science + case study
- Data/field access: two potential industry partners, but access is still uncertain
- Deadline: proposal draft due in 3 weeks

Please:

- Diagnose the main weaknesses in the current framing.
- Ask 5 sharp questions that would help narrow the problem.
- Suggest 3 more defensible versions of the research question.
- Explain the trade-offs between them.
- End with the smallest useful next action and what I should clarify with my supervisor.

# Example 2: Planning a literature search

Use the phd-assistant skill.

Current PhD stage: early literature review

Current artifact: a rough reading list and tentative review structure

Immediate bottleneck: I do not know what to read next and I am worried I am missing adjacent conversations

Relevant constraints:

- Discipline/domain: data spaces / digital platforms
- Thesis format: paper-based thesis
- Methods orientation: conceptual + empirical
- Access constraints: some databases available through the university, but not all

Support mode: Literature scout

Please:

1. Map the main subtopics or research conversations I should inspect.
2. Identify adjacent literatures or alternative framings I may be missing.
3. Propose a search strategy with keywords and combinations.
4. Tell me what kinds of disagreement or evidence I should look for.
5. If you mention papers or authors, label anything uncertain as tentative.
6. End with the next search action and what I must verify manually.

# Example 3: Stress-testing a methods section

Use the phd-assistant skill.

Current PhD stage: proposal design / methods definition

Current artifact: draft methods section

Immediate bottleneck: I am not sure whether this design is defensible enough for my next supervisor meeting

Relevant constraints:

- Methods orientation: qualitative interviews + document analysis
- Ethics/confidentiality: organizational confidentiality limits what I can share
- Deadline: ethics submission next month

Support mode: Skeptical reviewer

Please:

- Identify the strongest likely criticisms of this methods section.
- Point out validity threats, unclear logic, or missing design choices.
- Rank the issues by severity.
- Tell me which questions a tough supervisor or reviewer would probably ask first.
- End with the smallest useful next action and what I should take to my supervisor rather than decide alone.

# Example 3: Getting unstuck mid-PhD

Use the phd-assistant skill.

Current PhD stage: mid-PhD, between studies and writing

Current artifact: scattered task list, chapter notes, and paper backlog

Immediate bottleneck: I feel lost and I cannot see what the next sensible milestone should be

Relevant constraints:

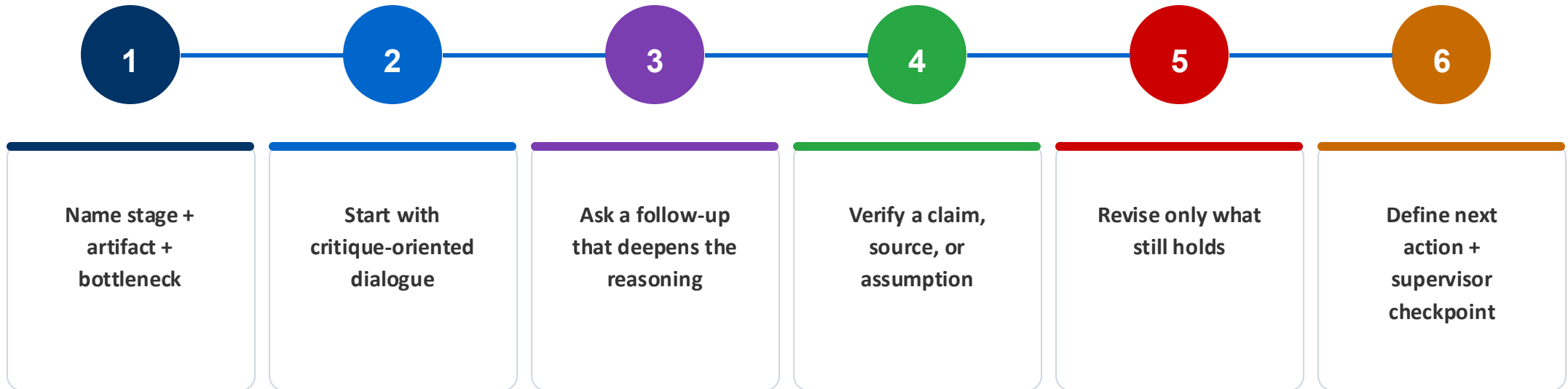
- Thesis format: paper-based thesis
- Current status: two papers drafted, one study delayed by data access
- Timeline: target defense in 12 months
- Supervisor expectation: bring a realistic plan to the next meeting

Support mode: Project orchestrator

Please:

- Reconstruct the likely current stage and the missing artifacts.
- Identify the main decision bottlenecks and risks.
- Propose a short milestone plan for the next 4 to 6 weeks.
- Separate what I should do alone from what I should discuss with my supervisor.
- End with the smallest useful next action I can take this week.

# Your new best friend: phd-assistant



# Wrapping-up

Crank

# Wrapping-up

## Take these home:

- **The loop is the value, not the first answer.** Propose → critique → verify → revise. If you only got polished prose, you underused the tool.
- **Match the task to the tool, not the tool to the hype.** General models for thinking and editing; source-grounded tools for literature; reference managers for control; phd-assistant for stage-aware support.
- **Use AI to sharpen, then to polish - in that order.** Critique the question, stress-test the method, challenge the argument *before* asking for better writing.
- **Verification is non-negotiable.** A real paper does not guarantee a correct summary. Always read the source before citing it.
- **Three roles are enough:** Critical Colleague, Skeptical Reviewer, Literature Scout. Name stage, artifact, and bottleneck.
- **Your assistant is artificial; your integrity stays 100% human.** AI is an assistant, not an author. The claim, the method, and the interpretation remain yours.
- **Leave with one better next conversation - with your supervisor.** The deliverable of this workshop is a repeatable workflow, not a prompt list.

**WE ARE SCIENCE.  
WE ARE TECHNOLOGY.  
WE ARE INNOVATION.  
WE ARE INESC TEC.**

# Use AI to sharpen (research) questions before they harden into a weak results

## Common problem

Topics start too broad, questions stay fuzzy, and the real contribution remains implicit. The result is a project that sounds ambitious but is hard to defend or execute.

Problem

## Useful dialogue moves

Ask for alternative formulations, hidden assumptions, trade-offs, and possible units of analysis. The assistant should behave like a critical colleague, not a ghost writer.

Dialogue

## Expected output

A narrower question, clearer scope, and a more feasible contribution. The point is not to let the model choose the question, but to help the researcher see stronger options.

Outcome

# Use AI to widen and organize the search before you trust any claim

## Scout questions

### What is missing?

Which adjacent conversations, concepts, or disciplines are currently absent from the review?

### What needs stronger evidence?

Which claims sound plausible but still need source-grounded verification?

### What should be read deeply?

Which papers deserve close reading instead of superficial summarization?

## Tool roles

### Consensus + Elicit

Find papers, scan research questions, and build a first pass over the literature landscape.

### ResearchRabbit + scite

Trace networks, contradictions, and citation context before over-trusting summaries.

### Zotero

Keep the evidence base under control: PDFs, notes, metadata, and reusable references.

### Human reading

A real citation does not guarantee a correct interpretation. Deep reading remains non-negotiable.

# The most useful assistant is often the one that pushes back

## ❓ What a skeptical reviewer notices first

Unclear logic between question and method; missing baselines or controls; unexplained design choices; vague claims about validity; hidden assumptions about data access, sampling, or feasibility.

## ✅ What should you do with that critique?

Turn objections into decisions: which threats are serious, what needs clarification before the supervisor meeting, and which weaknesses mean the design still needs revision. The assistant is useful here because it pushes back before a human reviewer does.

**Use critique before you use polish.**

# Writing support works best after the argument is made stronger

## **Skeptical reviewer**

Best for stress-testing claims, overreach, and argumentative weakness before submission.

Challenge

## **Confused reader**

Best for spotting jumps in logic, missing transitions, and places where the narrative becomes hard to follow.

Clarity

## **Constructive peer**

Best for suggesting stronger structure, better sequencing, and more defensible emphasis without taking authorship away.

Revision

Writing support works best after the logic is stronger; polishing should come last.