AI in Industry Collaboration

Resource Package

March,2025

Hardik M. and Ripudaman T.

Contents

Executive Summary .......................................................................................................... 3  
 Introduction ...................................................................................................................... 5

ChatGPT ............................................................................................................................ 5  
  Overview ....................................................................................................................... 5  
  Use Cases in Industry Collaboration ............................................................................ 5

Claude ................................................................................................................................ 5  
  Overview ....................................................................................................................... 5  
  Use Cases in Industry Collaboration ............................................................................ 5

Dimensions.ai .................................................................................................................... 5  
  Overview ....................................................................................................................... 5  
  Use Cases in Industry Collaboration ............................................................................ 6

Key Features ...................................................................................................................... 6  
 Intended Audience ............................................................................................................ 6  
 Purpose of the AI Tools ..................................................................................................... 6  
 How AI Enhances Educational Materials & Productivity .................................................. 6  
 Benefits for Students, Researchers & Industry ................................................................ 7

Getting Started with ChatGPT ........................................................................................... 7  
 Getting Started with Claude ............................................................................................. 7  
 Exploring Dimensions.ai ................................................................................................... 8

Users .................................................................................................................................. 8  
  User Stories .................................................................................................................. 9

Use Cases ........................................................................................................................ 11  
  Basics .......................................................................................................................... 11  
  Intermediate ................................................................................................................ 12  
  Advanced ..................................................................................................................... 13

Findings ............................................................................................................................ 15  
 Best Practices and Common Pitfalls .............................................................................. 15  
  Best Practices (Do’s) ................................................................................................... 15  
  Common Pitfalls (Don’ts) ............................................................................................ 17

Hands-On Exercise Materials .......................................................................................... 18  
  Part 1: Getting Started with AI Prompts ...................................................................... 18  
  Part 2: Writing & Refining Key Proposal Sections ........................................................ 18  
  Part 3: Structuring and Planning a Proposal ................................................................ 19  
  Part 4: Customization & Strategic Framing .................................................................. 20  
  Part 5: Demonstrating Impact & Sustainability ............................................................ 21  
  Part 6: Iteration and Feedback Response .................................................................... 21  
  Part 7: Final Review ...................................................................................................... 22

Self-Assessment Criteria .................................................................................................. 22

Implementation Case Study ............................................................................................. 23  
  Introduction .................................................................................................................. 23  
  Enhancing Educational Materials ................................................................................. 23  
  Improving Student Presentations ................................................................................. 24  
  Before & After: Productivity Comparison ...................................................................... 24

Conclusion ......................................................................................................................... 24

# Executive Summary

This resource package aims to support academic-industry collaboration by demonstrating how artificial intelligence (AI) tools, ChatGPT, Claude, and Dimensions.ai, can streamline research, grant writing, and communication. Developed for students, educators, and industry partners, the guide offers practical examples, user stories, best practices, and hands-on exercises to improve productivity and impact across collaborative projects.

# Purpose

The report showcases how AI tools can enhance the efficiency, quality, and effectiveness of academic and industry partnerships. It highlights how AI can assist in drafting proposals, identifying funding, facilitating communication, and aligning projects with real-world opportunities.

### Key Findings

* ChatGPT excels in fast content generation, outreach communication, and translating academic language into industry-relevant messaging.
* Claude is ideal for high-context tasks like research planning, proposal refinement, and ethical framing due to its reasoning abilities and long-form content handling.
* Dimensions.ai serves as a robust discovery platform for finding relevant research, funding trends, and potential collaborators.
* AI integration reduced writing and planning time by up to 50%, significantly increasing productivity in academic settings.
* Structured prompting, tool-task alignment, and iterative refinement are critical for effective AI use.

### Main Recommendations

1. Use Structured Prompts: Ensure prompts are clear, outcome-focused, and customized to the task (e.g., summaries, timelines, or abstracts).
2. Match Tools to Tasks: Use ChatGPT for drafting and communication, Claude for strategic reasoning, and Dimensions.ai for data-driven research and partner discovery.
3. Avoid Common Pitfalls: Do not rely on generic prompts or expect one tool to serve all purposes. Always review and refine AI-generated content.
4. Emphasize Collaboration: AI should be seen as a collaborator, not a replacement complementing human creativity and strategic judgment.

### Significance & Impact

The package offers a blueprint for how AI can transform how universities and industries collaborate—accelerating innovation, improving proposal success rates, and enhancing student learning. Stakeholders benefit through time savings, increased proposal quality, and stronger alignment with funding and research priorities.

### Next Steps

* Educators can integrate exercises into coursework to teach grant writing and research communication.
* Students should explore the tools for assignments, presentations, and research summaries.
* Industry partners can use these approaches to streamline collaboration and proposal development with academic teams.

# Introduction:

## Chat-GPT

Overview:

ChatGPT is a conversational AI model based on the GPT architecture developed by OpenAI. It excels at natural language understanding and generation, making it a versatile assistant for drafting, summarizing, translating, and ideating.

Use Cases in Industry Collaboration:

* Drafting grant proposals and executive summaries
* Translating academic research into industry-friendly language
* Writing outreach emails to potential partners
* Generating structured prompts based on user roles and tasks
* Creating knowledge-sharing content (e.g., FAQs, guides)

## Claude

Overview:

Claude is a large language model developed by Anthropic with a strong focus on safety, reliability, and reasoning. It excels in multi-step reasoning, long-form content handling, and ethical, contextual responses

Use Cases in Industry Collaboration:

* Writing thoughtful grant proposals or research abstracts
* Creating step-by-step strategic roadmaps for AI projects
* Drafting high-context communications between academic and corporate stakeholders
* Evaluating research gaps and suggesting innovation opportunities

## Dimensions.ai

Overview:

Dimensions is a research intelligence platform that connects scholarly content (papers, grants, patents) with real-time analytics. It’s designed to help users discover research trends, find funding, and identify collaboration opportunities.

Use Cases in Industry Collaboration:

* Finding industry-aligned research publications and grant calls
* Identifying potential academic or commercial collaborators
* Tracking research impact and funding history
* Validating alignment of proposals with current trends

### Key Features:

|  |  |  |
| --- | --- | --- |
| Tool | Function | How it supports collaboration |
| ChatGPT | Content Creation | Speeds up writing of grant proposals, communication drafts, and research summaries |
| Claude | High-context reasoning | Ideal for strategy building, roadmap planning, and role-based outputs |
| Dimensions.ai | Research discovery and analytics | Identifies collaborators, trends, and funding opportunities aligned with project goals |

### Who is the Intended Audience?

* Students
* Academic researchers/professors
* Industry partners

# Purpose of the AI Tools

Dimensions.ai is an advanced research intelligence platform that helps you discover potential industry partners, analyze funding landscapes, and gather evidence to strengthen your grant proposals.

AI chatbots can help draft, refine, and improve various sections of grant applications, saving time while enhancing the strategic positioning and persuasiveness of your proposals.

#### *How AI Enhances Educational Materials & Productivity:*

* Accelerated discovery: AI can screen thousands of potential material compositions in silico before laboratory testing, dramatically reducing the time to identify promising candidates
* Property prediction: Machine learning models can predict material properties based on composition and structure, enabling targeted design
* Process optimization: AI optimizes manufacturing parameters to enhance quality and reduce waste
* Microstructure analysis: Computer vision techniques automatically analyze material microstructures from imaging data
* Materials genomics: Large language models help organize and extract insights from vast materials science literature

#### *Benefits for Students, Researchers & Industry :*

* Students: AI personalizes learning and boosts academic performance through tailored support and tools.
* Researchers: AI accelerates the research process by analyzing literature, data, and generating insights.
* Industry Partners: AI drives innovation and efficiency across R&D, operations, and market strategy.

#### *Getting Started with ChatGPT (by OpenAI)*

* Go to: [https://chat.openai.com](https://chat.openai.com/)
* Sign up or log in using email, Google, or Microsoft account.
* Start chatting with the assistant right away in the text box.

Explore Features:

* Use GPT-4 (choose in the top-left dropdown if available).
* Try different tools like code interpreter, image input, or browsing (if on Pro plan).
* Use Custom GPTs (Explore tab) to find or create specialized bots.

#### *Getting Started with Claude (by Anthropic)*

* Go to: [https://claude.ai](https://claude.ai/)
* Sign up or log in with email and verify.
* Start chatting directly in the interface.

Explore Features:

* Upload PDFs or files for document analysis.
* Try different versions of Claude (e.g., Claude 3 Opus if available).
* Use the "My Files" tab to manage and reference uploads in chats.

*Exploring Dimension.ai (AI Research Discovery Tool)*

* Go to: [https://www.dimensions.ai](https://www.dimensions.ai/)
* Create a free account (use your academic email for more access).
* Log in and go to the search bar to start exploring.

Explore Features:

* Search publications, grants, patents, and clinical trials, results appear in a tabbed layout, with "Publications" selected by default, displaying titles, authors, journals, and publication years.
* You can interact with results using features like “Chat with PDF” and “Summarize,” helping you quickly understand the content of each article. Sorting options let you organize results by relevance, publication date, or citation metrics
* On the left, you'll find filters to narrow your results by year, researcher, research category, journal title, or open access availability.
* Meanwhile, the right sidebar offers analytical views, including citation trends over the years, leading research fields, top researchers, and major publication sources

# Users

### User Stories

#### *User Story 1 (Basic level)*

As a student, I want to summarize a research method in a few lines using AI, so I can better understand and describe it in my assignment.

Acceptance Criteria:

* The AI tool (e.g., ChatGPT) should allow input of a research topic or text.
* The output should be a simplified 2–3 line explanation.
* It should avoid jargon and be suitable for undergraduate understanding.
* I should be able to copy or download the summary easily.

#### *User Story 2 (Intermediate Level)*

As a professor, I want to generate a draft abstract for a joint paper with an industry partner, so I can initiate collaboration faster.

Acceptance Criteria:

* The AI (e.g., Claude) should allow input of keywords, research goals, and collaborator details.
* The generated abstract should follow academic structure: intro, problem, method, expected impact.
* The tone should be professional and ready for refinement.
* It should allow for edits and multiple drafts.

#### *User Story 3 (Advanced level)*

As a research lead, I want to create a multi-phase roadmap for an AI project with KPIs using Claude, so I can plan and communicate progress with academic and corporate teams.

Acceptance Criteria:

* The AI should accept high-context input (e.g., problem space, timeline, stakeholders).
* The output should include a phased strategy, tasks, timelines, and measurable KPIs.
* It should maintain logical flow and support export in readable formats (e.g., text, table).
* The roadmap should be editable and repeatable with updates.

#### *User Story 4 (Basic level)*

As a new researcher, I want to find relevant publications related to my project topic using Dimensions.ai, so I can start my literature review.

Acceptance Criteria:

* The tool should allow keyword-based searching.
* It should return recent and high-impact articles.
* Filters (e.g., year, journal, author) should be usable.
* I should be able to access summaries or full texts easily.

#### *User Story 5 (Intermediate level)*

As a grant applicant, I want to use AI to draft a proposal using a structured RCR format (Research, Context, Result), so I can save time and ensure quality.

Acceptance Criteria:

* The AI should support structured prompt inputs for RCR components.
* Output must include project rationale, methodology, expected outcomes.
* The tone should match grant conventions.
* The draft should be editable and allow improvements through iteration.

#### *User story 6 (Advanced level)*

As an innovation officer in industry, I want to validate whether a proposed collaboration aligns with current funding trends and key players, so I can make data-driven partnership decisions.

Acceptance Criteria:

* Dimensions.ai must allow search by sector and funding type.
* It should show current grants, applicants, collaborators, and impact stats.
* Visuals and filters must make it easy to compare opportunities.
* Data should be downloadable for team presentations.

## Use Cases:

### Basics

### Summarizing Research Methods with ChatGPT

Scenario:  
 A student is studying a complex paper on AI in healthcare and wants to understand the research method section.

How it works:

* The student copies the methodology section into ChatGPT.
* The AI provides a simplified 2–3 line summary explaining what was done, how, and why.

Outcome:  
 The student better understands the material and can include a clear summary in their assignment.

### Exploring Research Articles with Dimensions.ai

Scenario:  
 A master's student beginning their thesis on smart agriculture wants to find the latest research papers.

How it works:

* They go to [Dimensions.ai](https://www.dimensions.ai/), log in with their academic email.
* They search for “AI in precision farming” and apply filters (year: last 5 years, access: open access).
* They use the “Summarize” feature to quickly grasp the article content.

Outcome:  
 The student builds a solid base of literature to start their review.

### Drafting Academic Emails with ChatGPT

Scenario:  
 A new PhD student wants to email a potential industry collaborator but struggles with how to phrase it professionally.

How it works:

* The student enters a prompt like “Write a professional email to a robotics company proposing research collaboration on warehouse automation.”
* ChatGPT drafts a polite, clear, and concise email.

Outcome:  
 The student sends an effective collaboration request confidently.

### Intermediate

### Creating a Mini Literature Review with Claude

Scenario:  
 A postgraduate student needs to summarize findings from three papers on AI in supply chain optimization.

How it works:

* The student uploads PDFs or copies abstracts into Claude.
* They prompt Claude to summarize each and combine them into a comparative review.

Outcome:  
 The student gets a coherent mini-review suitable for inclusion in a research proposal or paper.

### Grant Discovery and Proposal Drafting

Scenario:  
 A faculty member plans to apply for a grant to explore AI in medical imaging.

How it works:

* They use Dimensions.ai to find active grants in the healthcare + AI domain.
* Using those details, they prompt ChatGPT to draft a proposal summary.
* Claude is used to generate a more in-depth 500-word RCR-style proposal.

Outcome:  
 They receive a strong, role-aligned draft ready for refinement and submission.

### Abstract Generation for Joint Paper

Scenario:  
 An academic working with a renewable energy startup needs an abstract for a conference submission.

How it works:

* They provide Claude with key themes and co-author details.
* Claude generates a structured, impactful abstract aligned with the conference theme.

Outcome:  
 They submit a well-written abstract that strengthens their academic-industry collaboration.

### Advanced

### Research Roadmap with KPIs using Claude

Scenario:  
 An academic team and an AI startup want to build a 2-year research roadmap for smart city applications.

How it works:

* They prompt Claude to generate a multi-phase plan: Problem > Objectives > Tasks > KPIs > Timeline.
* Claude reasons through dependencies, stakeholder roles, and expected outcomes.

Outcome:  
 They produce a professional roadmap that aligns with both academic rigor and business strategy.

### Strategic Grant Matching and Partner Discovery with Dimensions.ai

Scenario:  
 An industry R&D lead is exploring collaboration opportunities in machine learning for manufacturing.

How it works:

* They use Dimensions.ai to analyze current grant opportunities in the sector.
* The tool shows relevant publications, funding bodies, and researchers.
* Filters help them focus on high-impact researchers and funding trends.

Outcome:  
 They identify the right academic partners and submit a strong joint proposal backed by real data.

### Proposal Refinement and Ethical Framing with Claude

Scenario:  
 A university department is submitting a multi-million-dollar AI ethics grant proposal and wants to ensure professional tone and ethical sensitivity.

How it works:

* They use Claude to refine their existing draft for clarity, tone, and inclusion of ethical safeguards.
* Claude evaluates the societal impact section, and suggests rewordings that emphasize transparency and inclusion.

Outcome:  
 The final proposal is more persuasive and better aligned with funder expectations and ethical standards.

## Findings:

## Best Practices and Common Pitfalls:

For outputs that are explicit and role-specific, use ChatGPT and Claude in conjunction with structured prompts. Verify assertions with Dimensions.ai to make sure they match funding and real-world research data. Make sure the prompts are outcome-focused and rich in context. Avoid giving unclear directions, relying too much on AI without human assessment, or switching between technologies without knowing which ones work best for jobs requiring teamwork.

### Best Practices (Do’s) - Ai in industry Collaborations

#### Crafting Effective Prompts

* + To guarantee clarity, use structured forms such as provided in PromptLibrary. Example of structured prompt is in promptLibrary which we created.
  + Customize the prompts to the objectives of the industry (e.g., "Draft a grant abstract for AI in precision agriculture").
  + To direct AI answers, include the anticipated output format (table, summary, roadmap).
  + Establish the ideal intensity (mid for brainstorming, low for proposals, etc.).

#### Understanding Strengths of Each Tool

* + For drafting, summary, outreach, and brainstorming, ChatGPT is perfect.
  + Long-form, high-context reasoning, such as multi-step planning and research roadmaps, is where Claude excels.
  + For evidence-based discovery, including identifying relevant grants, partners, and research trends, Dimensions.ai is the greatest resource.
  + Select tools according to the data context and task difficulty (not all tools are appropriate for every step) so with collaboration of each tool we can get our work done and boost productivity.

#### Refining and Iterating

* + Review AI output frequently; if a response is too technical, ambiguous, or off-topic, adjust the prompt.
  + Use the same prompt in other tools to assess insight, tone, and detail.
  + Divide complex tasks into manageable chunks and logically sequence answers (Chain-of-Thought prompting), which can help in research work
  + Iterate outputs and match them to expected results.

#### *Understanding Strengths of Each Tool*

ChatGPT:

* Great for writing grant components (such as outreach emails, summaries, and objectives).
* adept in translating scholarly material into language that is relevant to the industry.
* Perfect for generating ideas, making templates for prompts, and adjusting tone according to the target audience.
* Excellent for organizing documents such as proposals, abstracts, and collaboration correspondence using proper prompt structure.
* Very helpful for producing preliminary drafts for writing assignments with a tight deadline.
* Good in giving resources and citations with providing valid link for redirecting for further research.

Best for: Fast content generation, structured prompts, communication templates.

Claude:

* Outstanding at managing lengthy, contextually rich activities, such as strategy roadmaps or whole grant bids.
* Does well on reasoning-intensive tasks like describing research avenues or assessing the impact of collaboration.
* Adept in upholding an ethical and professional demeanor, particularly in situations involving multiple stakeholders.
* Ideal for jobs involving step-by-step logic, such impact planning or research technique design.

Ideal for: Proposal refining, multi-part document production, ethical framing, and deep reasoning.

Pitfall: The links provided by Claude doesn’t work all the times.

Dimension.ai:

* Useful for finding partners and conducting research; learn who is financing, publishing, or working together in a field.
* Offers real-time data on grants, publications, patents, and funding trends, critical for aligning proposals with opportunities.
* Helpful in locating relevant work in academia and industry, research gaps, and high-impact collaborators.
* Increases the legitimacy of plans by providing current facts and evidence to support assertions.

Ideal for: Finding partners, obtaining funds, validating concepts, and matching funding priorities with research.

### Common Pitfalls (Don’ts)

* AI outputs will be superficial or unrelated if you employ generic or ambiguous prompts without context.
* Choose tools according to the sort of task (e.g., writing vs. research) rather than assuming they all have the same function.
* Always fact-check AI-generated content, especially in papers or proposals, and don't overlook review and validation.
* Don't rely too much on AI to take the place of critical thinking; instead, utilize it to improve your judgment.
* Remember to identify the intended audience; outputs intended for industry should be goal-oriented and free of jargon.
* Don't neglect to specify the output structure; ambiguous formats produce jumbled, unorganized results.
* Avoid switching up the temperature settings since excessively creative settings in professional documents can result in less useful, overly imaginative writing.
* Dimensions.ai is a discovery and analysis tool, not a language model, so don't expect it to produce content.
* Always ask yourself, "Does this serve both academic and industry needs?" before using AI outputs.

# Hands-On Exercise Materials

# Part 1: Getting Started with AI Prompts

#### Exercise 1: Introduce Your Project

Scenario: You are applying for a $50,000 grant to address youth mental health through peer-led workshops in local schools.  
 Task:  
 Use AI to generate a short introductory paragraph (3–4 sentences) describing your project.  
 Goal: Learn how to frame a clear, concise AI prompt to introduce your initiative effectively.

### Part 2: Writing & Refining Key Proposal Sections

#### Exercise 2: Draft an Executive Summary

Scenario: You're leading a program to improve maternal health outcomes among low-income women.  
 Task:  
 Prompt AI to write a 250-word executive summary covering the need, solution, goals, and organizational qualifications.  
 Goal: Learn how to specify structure and tone in your prompt to guide AI content.

#### Exercise 3: Develop a Problem Statement with Data

Scenario: You're working on food insecurity among college students.  
 Task:  
 Ask AI to write a compelling problem statement with 3–4 stats, linking food insecurity to academic performance and mental health.  
 Goal: Practice prompting for evidence-based, context-specific writing.

#### Exercise 4: Refine Basic Language

Scenario: You wrote: “We want to help students with stress by teaching mindfulness. We will run some weekly sessions and talk to counselors.”  
 Task:  
 Ask AI to improve this paragraph for clarity, professionalism, and grant-appropriate tone.  
 Goal: Learn how to use prompts for language polishing and formalization.

#### Exercise 5: Translate Technical to Plain Language

Scenario: Your proposal says: “We use a trauma-informed cognitive behavioral intervention model supported by emerging neuropsychological evidence.”  
 Task:  
 Prompt AI to rewrite this in accessible language for a community foundation audience.  
 Goal: Practice converting technical jargon into public-facing descriptions.

### Part 3: Structuring and Planning a Proposal

#### Exercise 6: Build an Outline

Scenario: You’re writing a grant for an after-school arts and leadership program.  
 Task:  
 Ask AI to create a full proposal outline with sections and descriptions based on your project.  
 Goal: Practice structuring a grant using standard components (e.g., Needs, Approach, Budget, Evaluation).

#### Exercise 7: Create a Timeline

Scenario: Your project is 12 months long and includes outreach, implementation, and evaluation.  
 Task:  
 Prompt AI to produce a month-by-month timeline with milestones.  
 Goal: Learn how to request detailed, sequential planning help from AI.

### Part 4: Customization & Strategic Framing

#### Exercise 8: Align with Funder Priorities

Scenario: A funder values "youth leadership," "community resilience," and "equity."  
 Task:  
 Ask AI to revise your project summary to highlight alignment with these three values.  
 Goal: Learn how to tailor content for funder-specific language.

#### Exercise 9: Add Community Context

Scenario: Your project serves a neighborhood with high refugee populations, language barriers, and underemployment.  
 Task:  
 Prompt AI to enhance your needs section to reflect these factors with sensitivity.  
 Goal: Practice contextualizing your proposal for real-world community settings.

### Part 5: Demonstrating Impact & Sustainability

#### Exercise 10: Create SMART Objectives

Scenario: Your program teaches financial literacy to young adults.  
 Task: Ask AI to generate 3 SMART objectives with outcome measures across short-, medium-, and long-term horizon.   
 Goal: Learn to guide AI in developing logic models and impact frameworks.

#### Exercise 11: Write a Sustainability Plan

Scenario: Your initiative depends on initial seed funding but must survive long-term.  
 Task:  
 Prompt AI to write a sustainability section including partner support, future funding, and earned revenue.  
 Goal: Understand how to structure prompts for strategic and forward-looking content.

### Part 6: Iteration and Feedback Response

#### Exercise 12: Address Reviewer Feedback

Scenario: A reviewer said your proposal lacks youth voice in the program design.  
 Task:  
 Ask AI to revise your methodology to incorporate meaningful youth engagement.  
 Goal: Learn to use AI to respond to specific critiques constructively.

#### Exercise 13: Refine a Budget Narrative

Scenario: Your staff costs were flagged as too high.  
 Task:  
 Use this input: “Our project manager costs $65,000 annually for coordination and evaluation tasks.”  
 Prompt AI to revise the budget narrative to strengthen justification.  
 Goal: Improve persuasive reasoning in budget justifications.

### Part 7: Final Review

#### Exercise 14: AI-Led Proposal Review

Scenario: You’ve drafted a full proposal.  
 Task:  
 Ask AI: “Review this grant proposal and identify 3 strengths and 3 areas for improvement.”  
 Goal: Explore AI as a tool for critical feedback and self-editing.

**Self-Assessment Criteria**

Scoring System

Charf4Bots

|  |  |  |
| --- | --- | --- |
| Category | What to Rate | (1-5) |
| Writing Quality | How clear and persuasive is the language? |  |
| How well does it avoid jargon or overly complex sentences? |
| How professional is the tone? |
| Grant Knowledge | How well does it understand grant terminology? |  |
| Does it follow standard grant formatting conventions? |
| Does it include all necessary sections? |
| Strategic Thinking | Does it align project with funder priorities? |  |
| Does it emphasize outcomes and impact? |
| Does it make compelling arguments for funding? |
| Customization | How well does it incorporate your specific details? |  |
| Does it adapt to different types of grants? |
| Can it match writing to different funders' expectations? |
| Helpfulness | How useful are its suggestions and recommendations? |  |
| How well does it respond to follow-up questions? |
| How good is it at improving existing content? |
| Efficiency | How quickly does it generate useful content? |  |
| How much editing is needed after generation? |
| Does it save time compared to writing from scratch? |

Total Score ( /30)

Dimensions.ai

|  |  |  |
| --- | --- | --- |
| Category | What to Rate (1-5) | Notes |
| Search Quality | How relevant are the results? |  |
| How well do filters work? |
| How easy is it to find specific information? |
| Partner Finding | Quality of company matches |  |
| Range of potential partners shown |
| Usefulness of company information |
| Grant Information | Coverage of funding opportunities |  |
| Easy access to past grant data |
| Helpful funder details |
| Usability | How intuitive is the interface? |  |
| Ease of saving/exporting results |
| Quality of data visualizations |
| Data Quality | How current is the information? |  |
| Coverage across different fields |

Total Score ( /25)

# Implementation Case Study

### Introduction

This is all about how research, teamwork, and grant writing are improved when AI tools—ChatGPT, Claude, and Dimensions.ai—are integrated into academic settings. The implementation, which was centered on a student-led capstone project, aided academic and business objectives by expediting communication workflows, enhancing content quality, and simplifying research procedures. The team co-developed resources such as research abstracts, grant proposals, and collaborative roadmaps by utilizing context-specific AI outputs and structured prompting. The intention was to demonstrate how AI may be used as a partner in interdisciplinary academic-industry partnership projects, rather than only as a tool.

### Enhancing Educational Materials

Claude and ChatGPT were used to create customized learning materials for instructors and students. These comprised grant writing modules, research gap identification tasks, and literature summaries. In order to provide precise, targeted outputs that complied with academic norms, use the prompt library provided. Recent articles and funding information were sourced using Dimensions.ai, guaranteeing that the resources were timely and pertinent. As a result, learning materials were more widely available and varied, freeing up faculty members to devote more time to mentoring rather than creating new materials. Without compromising on context or quality, these AI solutions assisted in scaling educational content.

### Improving Student Presentations

Students converted difficult academic texts into easily understood slide content by using ChatGPT. For technical subjects, Claude provided high-context summaries and detailed explanation scripts, and Dimensions.ai was used to locate evidence and empirical data to support assertions. As a result, students were able to offer thoroughly researched, industry-relevant presentations in a shorter amount of time. AI also assisted in creating visuals and speaker notes in response to prompt inputs. Students reported increased confidence, improved delivery structure, and more audience engagement as a result—particularly during joint industry presentations or proposal defences.

### Before & After: Productivity Comparison

Prior to integrating AI, researchers and students would manually spend eight to twelve hours writing study summaries or grant documents. After using ChatGPT and Claude, drafting time was lowered by half, with improved consistency and professional tone. Finding pertinent colleagues and citations took minutes instead of hours thanks to Dimensions.ai. The team used AI-generated templates and reviewer-focused summaries to finish a full 5-section draft of a grant proposal in two days, which is half the typical time. All things considered, AI converted labour-intensive, repetitive operations into streamlined, effective workflows, boosting output and freeing up more time for creative and strategic planning.

### Conclusion

By expediting research, enhancing communication, and simplifying grant writing, artificial intelligence (AI) platforms such as ChatGPT, Claude, and Dimensions.ai greatly improve academic–industry collaboration. They enable people to work more efficiently, intelligently, and in closer alignment with meaningful, practical innovation.