

The logo features the letters 'ai' in a stylized font, with a pink square above the 'i' and a blue square below the 'a'. To the right of 'ai' are the words 'FOR' and 'GOOD' stacked vertically in a bold, white, sans-serif font.

ai FOR
GOOD



PROMPT GUIDE
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Pacific Northwest
NATIONAL LABORATORY

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EDUCATION
AND LEARNING



CREATE ACCESSIBLE COURSE CONTENT

What it does: Transforms complex academic concepts into clear explanations for different audiences and learning levels.

Sample Prompt:

Explain quantum mechanics to undergraduate non-physics majors. Use analogies they can relate to and avoid technical jargon. Make it engaging and focus on why it matters in everyday life.

Try this if you're working on:

- ▶ Making specialized content accessible to broader audiences
- ▶ Teaching outside your primary expertise area
- ▶ Creating introductory materials for complex topics

Quick Tips:

- ▶ Always verify the scientific accuracy of AI explanations
- ▶ Ask for multiple analogies to find the most effective one



CREATE PEER REVIEW TEMPLATES

What it does: Develops structured feedback tools that help students give meaningful critiques of each other's work.

Sample Prompt:

Create a peer review template for graduate-level research presentations in psychology that guides students to give constructive feedback on methodology, evidence, and conclusions. Presentations should be 10 minutes in length with 12 minutes for questions and answers and be designed for a scholarly audience. Students should emphasize clarity of research intent and method as well as description of the implications and limitations of the work.

Try this if you're working on:

- ▶ Teaching students to give quality feedback
- ▶ Building collaborative learning skills
- ▶ Preparing students for professional peer review

Quick Tips:

- ▶ Model effective peer review yourself
- ▶ Include both strengths and areas for improvement



GENERATE DISCUSSION QUESTIONS AND PROMPTS

What it does: Creates engaging discussion questions and writing prompts to spark student thinking and participation.

Sample Prompt:

Create 5 discussion questions for a university-level sociology class about social media's impact on relationships. Make them thought-provoking but accessible to undergraduates, and include both personal reflection and analytical thinking.

Try this if you're working on:

- ▶ Breaking the ice in new classes or with quiet students
- ▶ Moving beyond basic recall to deeper thinking
- ▶ Generating fresh questions for familiar topics

Quick Tips:

- ▶ Mix personal and analytical questions for variety
- ▶ Test questions yourself—can you answer them in multiple ways?



CREATE COURSE SYLLABUS CONTENT

What it does: Develops comprehensive syllabus sections, including learning objectives, assignment descriptions, and course policies.

Sample Prompt:

Write learning objectives for a 300-level 'Environmental Policy' course that align with Bloom's taxonomy. Include three objectives each for analysis, synthesis, and evaluation levels. Connect each objective to specific skills students will need in environmental careers.

Try this if you're working on:

- ▶ *Aligning course goals with program outcomes*
- ▶ *Creating clear expectations for student learning*
- ▶ *Connecting academic content to career preparation*

Quick Tips:

- ▶ *Review your institution's guidelines for learning objective formatting*
- ▶ *Make sure objectives are measurable and specific to your field*



CREATE DOMAIN-SPECIFIC CASE STUDIES

What it does: Develops realistic scenarios based on current research that students can analyze and discuss.

Sample Prompt:

Create three case studies based on these recent research studies for university-level civil engineering students based on recent research about urban heat islands and cooling strategies. Include information about real cities, cost-benefit considerations, and multiple solution approaches for class discussion. The case studies should take roughly 5-10 minutes to present. Include notes for the creation of PowerPoint slides and discussion questions. [Upload or copy and paste paper content.]

Sample papers on this prompt:

Irfeey, A. M. M., Chau, H. W., Sumaiya, M. M. F., Wai, C. Y., Muttill, N., and Jamei, E. (2023). Sustainable mitigation strategies for urban heat island effects in urban areas. *Sustainability*, 15(14), 10767. <https://doi.org/10.3390/su151410767>.

Qian, W., and Li, X. (2023). A cold island connectivity and network perspective to mitigate the urban heat island effect. *Sustainable Cities and Society*, 94, 104525. <https://doi.org/10.1016/j.scs.2023.104525>

Marando, F., Heris, M. P., Zulian, G., Udías, A., Mentaschi, L., Chrysoulakis, N., ... and Maes, J. (2022). Urban heat island mitigation by green infrastructure in European Functional Urban Areas. *Sustainable cities and society*, 77, 103564. <https://doi.org/10.1016/j.scs.2021.103564>

Try this if you're working on:

- ▶ Connecting coursework to current research
- ▶ Developing critical thinking skills
- ▶ Making abstract concepts concrete

Quick Tips:

- ▶ Use recent, peer-reviewed research with which you are familiar to make validation of the information easier
- ▶ Include multiple perspectives and solutions



CREATE AI LITERACY ASSIGNMENTS

What it does: Designs assignments that teach students to use AI tools critically and transparently in their academic work.

Sample Prompt:

Create an assignment for upper-level biology students where they must use ChatGPT to help explain a complex research paper, then document what the AI got right, what it missed, and what they had to verify independently. Include a reflection component where students analyze AI's strengths and limitations for academic research.

Try this if you're working on:

- ▶ Teaching responsible AI use in academic settings
- ▶ Building critical thinking about information sources
- ▶ Preparing students for AI-integrated professional work

Quick Tips:

- ▶ Choose topics you know well so you can spot AI errors
- ▶ Emphasize the documentation and reflection process
- ▶ Focus on AI as a tool that requires human oversight



**AI FOR SCIENTIFIC
DISCOVERY
AND RESEARCH**



EXPLORE SCIENTIFIC QUESTIONS

What it does: Generates interesting scientific questions and explanations about topics you're curious about.

Sample Prompt:

I'm curious about why some people are naturally better at remembering faces than others. What do scientists think causes this difference? What questions are researchers still trying to answer about facial recognition and memory? Also, suggest three reliable sources where I can verify this information.

Try this if you're working on:

- ▶ Understanding scientific topics that interest you
- ▶ Finding research-backed answers to everyday questions
- ▶ Learning what scientists are currently studying

Quick Tips:

- ▶ Ask AI to suggest sources you can check independently
- ▶ Look for multiple sources that agree on key facts



PLAN SIMPLE EXPERIMENTS

What it does: Helps you design basic experiments or observations you can do at home or work to explore scientific questions.

Sample Prompt:

I want to test whether plants really grow better with music. Help me design a simple 2-week experiment I can do at home. What do I need? How should I set it up? What should I measure and record?

Try this if you're working on:

- ▶ Testing things you've always wondered about
- ▶ Teaching kids or students about scientific thinking
- ▶ Satisfying your curiosity with hands-on exploration

Quick Tips:

- ▶ Keep experiments simple with materials you already have
- ▶ Focus on one variable at a time



RESEARCH TOPIC BACKGROUND

What it does: Creates overviews of scientific topics, including current research trends and key findings, with built-in fact-checking strategies.

Sample Prompt:

I want to understand the current state of research on sleep and productivity. Give me an overview of what scientists have discovered, what methods they use to study this, and what major questions remain unanswered. Include specific topics and key terms I can search on scholarly data sources (e.g., Google Scholar) that I can use to verify these claims.

Try this if you're working on:

- ▶ Getting up to speed on unfamiliar research areas
- ▶ Understanding the bigger picture of scientific fields
- ▶ Preparing for research projects or proposals

Quick Tips:

- ▶ Ask AI to identify potential biases or limitations in research
- ▶ Cross-check claims using academic databases or reputable science sources



INTERPRET PUBLIC DATA SOURCES

What it does: Helps you find, understand, and analyze publicly available scientific data to answer questions you're curious about.

Sample Prompt:

I want to understand if there's a relationship between a city's population size and its air quality. Help me identify what public datasets I could use, what specific measurements to look for, and how to interpret any patterns I might find. What confounding factors should I consider?

Try this if you're working on:

- ▶ Learning to work with real-world data
- ▶ Understanding how to approach data-driven questions
- ▶ Connecting observations to measurable evidence

Quick Tips:

- ▶ Start with topics you already have some knowledge about
- ▶ Ask AI to explain both the data sources and the analytical approach
- ▶ Focus on learning the thinking process, not just getting answers



GENERATE RESEARCH HYPOTHESES

What it does: Creates testable hypotheses and research questions based on existing knowledge and observations.

Sample Prompt:

Based on what we know about urban heat islands and plant growth, help me generate three testable hypotheses about how different types of green roofs might affect building energy use. Include what variables I'd need to measure and potential confounding factors.

Try this if you're working on:

- ▶ Developing new research ideas
- ▶ Moving from observations to testable questions
- ▶ Thinking systematically about complex problems

Quick Tips:

- ▶ Build on existing research rather than starting from scratch
- ▶ Make sure hypotheses are actually testable with available resources



DESIGN LITERATURE REVIEWS

What it does: Creates frameworks for organizing and synthesizing research from multiple sources on complex topics.

Sample Prompt:

Help me create a systematic approach to reviewing research on social media's effects on teen mental health. What key themes should I organize around? What types of studies should I prioritize? What contradictions or gaps should I look for?

Try this if you're working on:

- ▶ Organizing large amounts of research information
- ▶ Identifying gaps in current knowledge
- ▶ Preparing comprehensive background research

Quick Tips:

- ▶ Start with broad themes, then narrow to specific questions
- ▶ Always verify AI suggestions against actual research sources



AI FOR BUSINESS AND ENTREPRENEURSHIP



CREATE MARKETING CONTENT

What it does: Generates social media posts, email content, and promotional materials for your business or ideas.

Sample Prompt:

I run a small tutoring service for high school students. Create five Facebook posts for this week that would attract parents and students. Make them friendly but professional, and include different types of content like tips, success stories, and service highlights.

Try this if you're working on:

- ▶ Getting started with social media marketing
- ▶ Creating consistent content for your business
- ▶ Overcoming writer's block for promotional materials

Quick Tips:

- ▶ Always review and personalize AI content before posting
- ▶ Ask for multiple options to find your preferred tone and style



WRITE PROFESSIONAL COMMUNICATIONS

What it does: Helps you craft professional emails, proposals, and customer communications that sound polished and clear.

Sample Prompt:

Help me write a professional email to a potential client explaining my freelance graphic design services. I want to sound confident but not pushy and include information about my experience, process, and next steps.

Try this if you're working on:

- ▶ Improving your professional writing
- ▶ Making a good first impression with clients
- ▶ Communicating value without sounding salesy

Quick Tips:

- ▶ Include specific details about your situation for better results
- ▶ Always add your personal touch to AI-generated communications



DEVELOP BUSINESS PLANS AND STRATEGIES

What it does: Creates structured business planning documents, market analysis, and strategic frameworks for business decisions.

Sample Prompt:

I'm thinking about starting a food truck business in the Tri-Cities area. Help me create a basic market analysis framework: what questions should I research, what local factors should I consider, and what would make this business viable or risky?

Try this if you're working on:

- ▶ Organizing your business ideas systematically
- ▶ Understanding market research and competitive analysis
- ▶ Creating professional business documentation

Quick Tips:

- ▶ Use AI for structure and framework, but do your own local research
- ▶ Break complex business plans into smaller, manageable sections



ANALYZE CUSTOMER FEEDBACK AND TRENDS

What it does: Helps you interpret customer reviews, feedback, and market trends to make better business decisions.

Sample Prompt:

I've been getting mixed reviews for my online workshop business. Help me create a systematic approach to analyzing customer feedback: what categories should I organize comments into, what patterns should I look for, and how can I turn criticism into actionable improvements?

Try this if you're working on:

- ▶ Making sense of customer feedback and reviews
- ▶ Identifying patterns in business performance
- ▶ Turning feedback into concrete action steps

Quick Tips:

- ▶ Focus on actionable insights rather than just positive or negative sentiment
- ▶ Look for specific, recurring themes in feedback



CREATE PRICING MODEL

What it does: Develops financial planning tools, pricing strategies, and revenue projections for business decision-making.

Sample Prompt:

Help me create a pricing strategy for my consulting business. I want to offer three service tiers (basic, standard, and premium) for small business marketing consulting. Guide me through what factors to consider, how to structure the packages, and what questions to ask to test if my pricing makes sense.

Try this if you're working on:

- ▶ Developing sustainable pricing strategies
- ▶ Creating financial projections and business models
- ▶ Making data-driven financial decisions

Quick Tips:

- ▶ Start with market research on competitor pricing
- ▶ Always test pricing assumptions with real potential customers



DESIGN OPERATIONAL SYSTEMS AND PROCESSES

What it does: Creates systematic approaches to business operations, workflow optimization, and process improvement.

Sample Prompt:

I run a growing home-based catering business, and I'm losing track of orders, inventory, and deadlines. Help me design a simple operational system: what processes should I document, what tools might help me stay organized, and how can I prevent things from falling through the cracks as I grow?

Try this if you're working on:

- ▶ *Scaling business operations efficiently*
- ▶ *Creating systems that work without constant oversight*
- ▶ *Preventing operational problems before they happen*

Quick Tips:

- ▶ *Focus on your biggest operational pain points first*
- ▶ *Keep systems simple enough that you'll actually use them consistently*



**AI FOR COMMUNITY &
CIVIC ENGAGEMENT**



WRITE COMMUNITY COMMUNICATIONS

What it does: Creates newsletters, announcements, and social media posts to keep your community informed and engaged.

Sample Prompt:

Help me write a Facebook post for our neighborhood group about the new community garden project starting next month. We've secured a vacant lot at Oak Street and 5th Avenue; we're looking for 20 volunteers to help with the initial setup on Saturday, May 15th from 9 a.m. to 2 p.m., and families can sign up for garden plots starting June 1st. Make it enthusiastic and encouraging.

Try this if you're working on:

- ▶ Keeping community members informed about important issues
- ▶ Writing clear, friendly communications for diverse audiences
- ▶ Encouraging community participation and involvement

Quick Tips:

- ▶ Include specific details (dates, locations, contact info) in your prompt
- ▶ Keep language accessible to all education and age levels



PLAN COMMUNITY EVENTS

What it does: Generates ideas, checklists, and organizational frameworks for community gatherings and activities.

Sample Prompt:

I want to organize a neighborhood cleanup day for about 30-40 volunteers. Help me create a complete planning checklist: what supplies do I need, how should I organize volunteers, what permits or permissions might I need, and what timeline should I follow?

Try this if you're working on:

- ▶ Organizing successful community events
- ▶ Managing volunteers and logistics
- ▶ Making sure you don't forget important planning steps

Quick Tips:

- ▶ Ask for both planning timeline and day-of-event checklists
- ▶ Include backup plans for weather or low turnout



DEVELOP VOLUNTEER PROGRAMS

What it does: Creates structured approaches to recruiting, training, and managing volunteers for community projects.

Sample Prompt:

Our local food bank needs to expand our volunteer program from 10 to 30 regular volunteers. Help me design a system for recruiting, training, and scheduling volunteers. What roles should we create, how do we onboard people effectively, and how do we keep volunteers engaged long-term?

Try this if you're working on:

- ▶ Growing volunteer participation in your organization
- ▶ Creating sustainable volunteer management systems
- ▶ Building community engagement around causes you care about

Quick Tips:

- ▶ Focus on making volunteering rewarding and meaningful
- ▶ Create clear role descriptions and expectations



WRITE GRANT APPLICATIONS AND FUNDING REQUESTS

What it does: Helps structure funding proposals, craft compelling narratives, and organize grant application materials.

Sample Prompt:

Help me outline a grant proposal for a community garden project. We need \$5,000 to build raised beds and provide tools for a neighborhood garden. Guide me through the key sections I should include and help me articulate the community benefits and impact.

Try this if you're working on:

- ▶ Securing funding for community projects
- ▶ Writing compelling proposals that highlight community impact
- ▶ Organizing complex application requirements

Quick Tips:

- ▶ Research specific funder requirements before using AI to help with structure
- ▶ Focus on measurable community benefits and outcomes



CREATE ADVOCACY CAMPAIGNS

What it does: Develops strategic approaches to community advocacy, including messaging, tactics, and stakeholder engagement plans.

Sample Prompt:

Our community wants to advocate for better public transit connections to the medical district. Help me create a strategic advocacy plan. What key stakeholders should we engage, what arguments would be most compelling, and what tactics would be most effective for local government?

Try this if you're working on:

- ▶ Building coalitions around community issues
- ▶ Developing persuasive arguments for policy change
- ▶ Creating strategic approaches to civic engagement

Quick Tips:

- ▶ Research your local political landscape and decision-making processes
- ▶ Focus on solutions and benefits, not just problems



DESIGN COMMUNITY SURVEYS AND FEEDBACK SYSTEMS

What it does: Creates systematic approaches to gathering, analyzing, and acting on community input and feedback.

Sample Prompt:

We want to understand our community's priorities for the new park being built downtown. Help me design a comprehensive community input process: what questions should we ask, how can we reach diverse community members, and how should we analyze and report back on what we learn?

Try this if you're working on:

- ▶ Ensuring all community voices are heard in decision-making
- ▶ Creating inclusive feedback processes
- ▶ Turning community input into actionable plans

Quick Tips:

- ▶ Plan for multiple ways people can participate (online, in person, different languages)
- ▶ Always share results back with the community who provided input



**AI FOR PERSONAL
AND PROFESSIONAL
DEVELOPMENT**



CREATE LEARNING PLANS AND SKILL DEVELOPMENT

What it does: Generates structured learning plans and study schedules for skills you want to develop.

Sample Prompt:

I want to improve my public speaking skills over the next 3 months. I can dedicate about 30 minutes twice a week to practice. Create a week-by-week learning plan with specific exercises, resources to look for, and milestones to track my progress.

Try this if you're working on:

- ▶ Building new skills systematically
- ▶ Creating accountability for personal growth goals
- ▶ Breaking big learning goals into manageable steps

Quick Tips:

- ▶ Be specific about your time constraints and current skill level
- ▶ Ask for both practice activities and ways to measure progress



WRITE PROFESSIONAL DEVELOPMENT MATERIALS

What it does: Helps create resumes, cover letters, LinkedIn profiles, and other career-focused documents.

Sample Prompt:

Help me write a compelling LinkedIn summary for someone transitioning from teaching to corporate training. I have 8 years of classroom experience, I've designed curriculum for diverse learners, and I want to highlight skills that transfer to employee development roles.

Try this if you're working on:

- ▶ Career transitions and job searching
- ▶ Highlighting transferable skills effectively
- ▶ Creating a professional online presence

Quick Tips:

- ▶ Include specific experience and achievements for AI to work with
- ▶ Customize AI suggestions to match your authentic voice and style



DESIGN PRODUCTIVITY SYSTEMS

What it does: Creates personalized organization systems, workflows, and productivity strategies tailored to your work style.

Sample Prompt:

I'm overwhelmed managing multiple freelance projects, family obligations, and personal goals. Help me design a simple productivity system. I prefer digital tools, need something I can check quickly throughout the day, and tend to forget tasks if I don't write them down immediately.

Try this if you're working on:

- ▶ Managing competing priorities and deadlines
- ▶ Creating sustainable organizational habits
- ▶ Reducing stress through better planning

Quick Tips:

- ▶ Be honest about your current habits and what hasn't worked before
- ▶ Start with simple systems you can implement immediately



PLAN CAREER STRATEGY AND GOAL SETTING

What it does: Develops strategic approaches to career advancement, goal achievement, and professional networking.

Sample Prompt:

I'm a mid-career software developer who wants to move into technical leadership within 2 years. Help me create a strategic plan: what skills should I develop, what experiences should I seek, how should I build my network, and what milestones would indicate I'm on track?

Try this if you're working on:

- ▶ Strategic career planning and advancement
- ▶ Building professional networks and relationships
- ▶ Setting and achieving long-term professional goals

Quick Tips:

- ▶ Research industry trends and requirements in your field
- ▶ Include both skill development and relationship-building strategies



CREATE PERSONAL BRANDING STRATEGY

What it does: Develops comprehensive personal branding approaches, including messaging, content strategy, and professional positioning.

Sample Prompt:

I'm a project manager who wants to establish myself as an expert in remote team management. Help me create a personal branding strategy: what key messages should I focus on, what types of content should I create, where should I share my expertise, and how do I build credibility in this field over the next year?

Try this if you're working on:

- ▶ Building professional reputation and visibility
- ▶ Establishing expertise in your field
- ▶ Creating consistent professional messaging across platforms

Quick Tips:

- ▶ Focus on authentic expertise and genuine value you can provide
- ▶ Plan for consistent, long-term brand building rather than quick wins



DESIGN NETWORKING AND RELATIONSHIP BUILDING STRATEGIES

What it does: Creates systematic approaches to building professional relationships, expanding networks, and maintaining meaningful connections.

Sample Prompt:

I want to expand my professional network in the healthcare technology field, but I'm naturally introverted and find networking events overwhelming. Help me create a networking strategy that plays to my strengths: what approaches would work for introverts, how can I prepare for networking situations, and what follow-up systems should I use?

Try this if you're working on:

- ▶ Building meaningful professional relationships
- ▶ Expanding your industry connections strategically
- ▶ Creating sustainable networking habits that fit your personality

Quick Tips:

- ▶ Focus on quality relationships over quantity of contacts
- ▶ Plan for regular follow-up and relationship maintenance



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