AI
Best Practices
Guide

BELMONT DATA & AI COLLABORATIVE

BELMONT UNIVERSITY

What is AI?

Artificial Intelligence (AI) - A system that can perform some tasks that normally require human intelligence.

Make Artificial Intelligence Your Digital Ally

AI is more than just a tool; it's a **versatile** partner that helps you work **faster** and think creatively. Use AI to handle routine tasks, spark ideas, draft content, and organize information. This guide provides **practical** ways to integrate AI into your workflow, enabling you to focus on what matters most: creativity, strategy, and informed decision-making.

The key is to

Embrace: Start each day seeking AI solutions for routine tasks. Explore new tools often to find where AI adds the most value.

Experiment: Don't hesitate to try it out! Most services are (nearly) free. Run the AI tool and review the result. You might discover a great solution, and even if you don't, there's little to lose.

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Start Your AI Journey: It's Easier Than You Think!

Embrace the Experiment!

AI is designed for exploration, not perfection. You don't need technical skills—just curiosity. Start small, experiment freely, and discover how AI can simplify everyday tasks, enhance your creativity, and support meaningful, strategic work.

Commit to Improving Productivity

AI is here to enhance your productivity, not replace your thinking. By starting small and experimenting with everyday tasks, you can save time, build confidence, and focus on the creative, strategic work that matters most.

Choosing Your Starting Tool

Remember: It costs nothing to try. The only way to get good is to try frequently. Make AI tools your playground!

Ask Yourself:

- ✓ New to AI: Start with ChatGPT or Claude.
- ✓ Microsoft User: Copilot integrates with your existing tools.
- ✓ Google Ecosystem: Gemini works seamlessly with Gmail and Docs.

Where to Go Right Now?

- The best way to learn is by **experimenting**.
- Ask unusual questions, try different styles, and refine your prompts.
- You've got this. Next, we'll learn how to talk to your new AI collaborator effectively!

Scan or click the QR code to get started with an AI tool

Generative AI: Your New Digital Ally

Have you ever wondered how AI can write a poem, summarize a report, or generate code?

Generative AI – Produces content such as text, images, and video, based on patterns derived from training data. One way to implement Generative AI is by using an LLM (Large Language Model).

What Are LLMs?

Think of them as incredibly well-read assistants who:

- Have vast amounts of human knowledge.
- Can hold natural conversations about almost any topic.
- Remember context throughout your conversation.
- Adapt their communication style to match your needs.
- Work 24/7 and never get tired or impatient.

LLMs Are Good At

- Writing & Communication
- Research & Analysis
- Creative & Strategic Thinking
- Learning & Problem-Solving
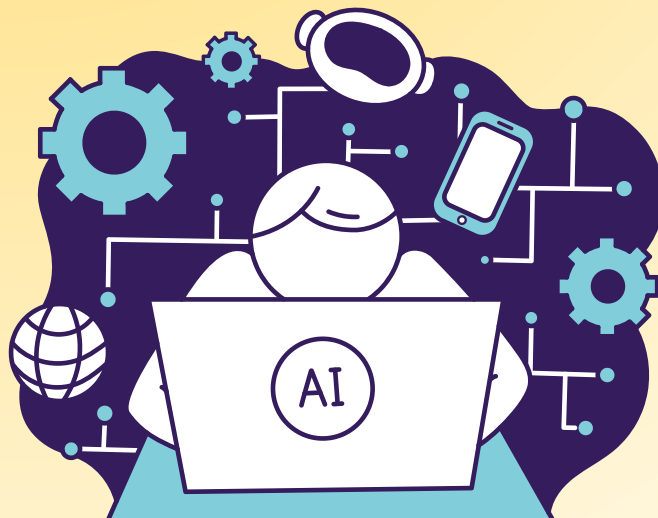
LLMs Aren't Great At

- Real-Time Information
- Perfect Accuracy

Key Insight
Think of LLMs as knowledgeable advisors, not infallible authorities. Always verify important information and use your judgment.

Scan or click the QR code to learn more about LLMs

Prompt Engineering:
The Art of AI Communication

What is Prompt Engineering?

- Prompt engineering is the process of crafting instructions that generate the AI results you want. It's like learning to communicate clearly with a brilliant but literal colleague who needs specific guidance to do their best work.

The CLEAR Framework for Better Prompts

CONTEXT: Always provide relevant background information

LENGTH: Specify desired output length and format

EXAMPLES: Show the AI what good looks like with examples

AUDIENCE: Define who will consume this content

ROLE: Tell the AI what perspective to take

Academic Prompting Principles

For All Academic Fields

- **State your academic level** (undergraduate, graduate, faculty)
- **Add relevant context** (course goals, field standards, institutional expectations)
- **Encourage critical thinking** by asking for multiple perspectives
- **Request evidence-based reasoning** aligned with your discipline
- **Include assessment criteria** to ensure academic rigor

Prompt Enhancement Techniques

- **Temporal context:** "Given current trends in [field]…"
- **Stakeholder perspectives:** "Consider how [relevant groups] might view…"
- **Practical relevance:** "How would this apply in real-world practice?"
- **Interdisciplinary links:** "How does this connect to [other fields]?"

Scan the QR code to learn how to craft effective AI prompts

Context Engineering

Context is crucial for quality AI output. You provide your physician with detailed context, including symptoms, history, and your specific complaint. AI needs the same courtesy. **Context engineering** gives the right info at the right time for the best results—the prompt is only part of it.

The **context window** is the amount of information a model can process at once; too much info gets ignored, and bigger windows eventually give diminishing returns. Watch for issues like context poisoning or clashes.

A good prompt is just the beginning...

- Context is critical.
- Context sources
  - Prompt
  - Previous conversation, user preferences
  - Current conversation and responses
  - Knowledge base (e.g., documents, data)
  - Tools

Many AI models will allow you to
1. Configure guidance for all prompts.
2. Remember facts about you (e.g., home city).
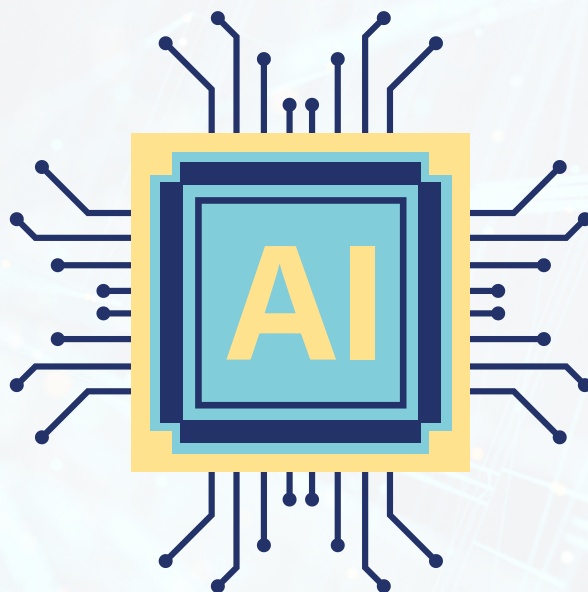
Scan or click the QR code to learn

more on context engineering

AI and Your Data

Do you have a set of data to analyze? AI can assist, from simply understanding the data through summary or visualization to predicting future outcomes. Start with the following guidelines to encourage higher-quality results:

Clean
Clean your data by removing duplicates, fixing errors, keeping formats consistent, standardizing values, and handling missing info (delete, fill in, or tag).

Structure
Organize your data in a way that is easy for AI to understand. For example, use a CSV with column headers or JSON.

Mask
Remove or anonymize sensitive data (see Data Protection: Your Action Plan page).

Bias
Understand and mitigate data biases (e.g., confirmation, availability, historical bias).

Be mindful of the data policies associated with the AI tools you use. Many platforms reserve the right to access and utilize your input data. However, local regulations may place limits on how that data can be used.

Scan or click the QR code to learn more on AI and Your Data

Specialized Tasks

Finding the Right Tool

- **Define Your Task**
  - Be clear about what you need.
- **Identify Must-Haves**
  - Consider your budget, required features, and compatibility with your current tools.
- **Search Strategically in AI**
  - Use specific queries like "AI tool for syllabus layout" or "best free image editor for students".
- **Compare Thoughtfully**
  - Look at user reviews, tutorials, and feature breakdowns to make an informed choice.

🔍 What AI tool can generate an image? ✕   **Copilot**

🔍 What AI tool can edit a photo? ✕   **Ps | Adobe Photoshop**

🔍 What AI tool helps with home decor? ✕   **HomeDesignsAI**

🔍 Best AI tool for studying? ✕   **NotebookLM**

🔍 AI tool to create a syllabus layout? ✕   **Easy-Peasy.AI**
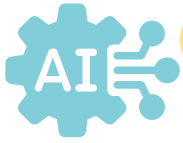
Choosing between AI tools? Learn a quick way to find the one that fits your needs best.

Questions to Ask

✓ Does it solve my exact problem?   ✓ What is the cost?

✓ Is it easy to learn?   ✓ Does it work with my current setup?

Agentic AI

AI Automation

AI systems that perform tasks requiring decisions or planning often do so without human intervention.
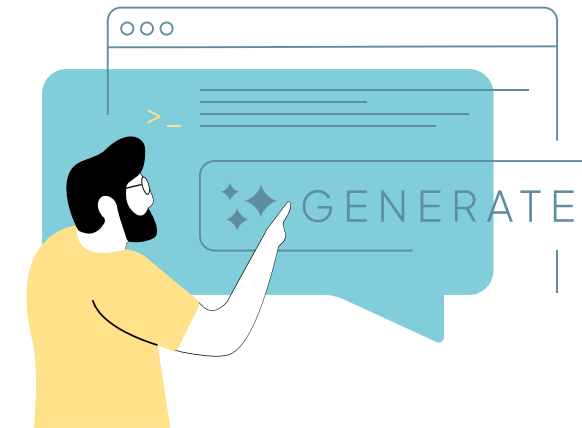
Types of AI Systems

Reactive AI: Responds to prompts (e.g., Claude, Siri).

Autonomous AI Agents:

- Perceive, plan, and act repeatedly.
- Example: Detect power failure → plan solution → reroute power → request repair.
- Many no-code tools exist for building agents.
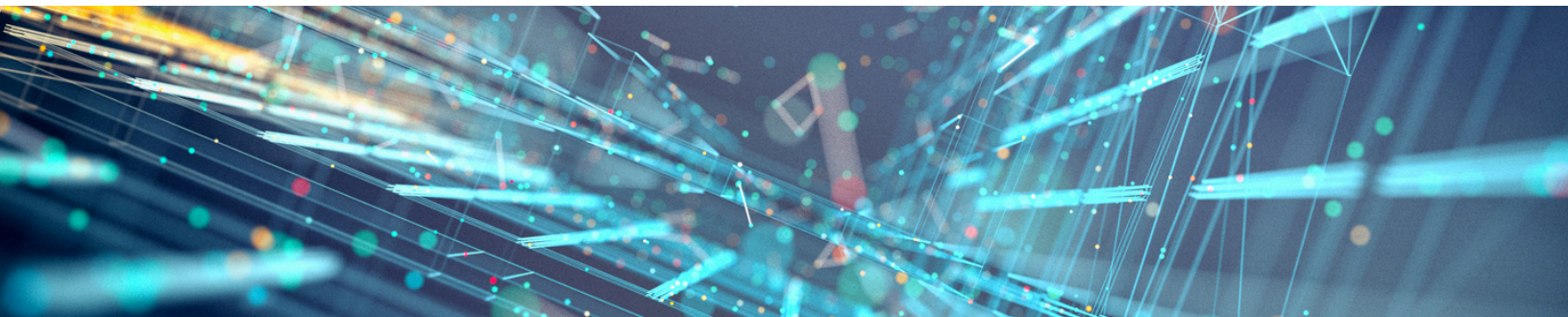
Key Considerations

Use with caution:

- May make wrong decisions in unexpected situations
  - Design systems to request human input when confidence in perception or planning is low.

Security Risks:

- Malicious actors can exploit automation
- Example: Triggering false fire alarms to unlock doors

AI In Education

For Students

AI tools can support learning, creativity, and productivity. Here are some common uses:

- **Study Support:** Summarize readings, generate flashcards, or explain complex concepts.

- **Writing Help:** Draft essays, improve grammar, and generate citations.

- **Creative Projects:** Generate images, music, or design layouts for presentations.

- **Career Prep:** Write resumes, cover letters, and practice interview questions.

For Faculty

AI tools can enhance teaching, streamline administrative tasks, and support curriculum development:

- **Course Design:** Build syllabi, lesson plans, and rubrics.

- **Content Creation:** Generate visuals, quizzes, and multimedia materials.

- **Grading Efficiency:** Use AI to help evaluate written work or detect plagiarism.

- **Research Assistance:** Summarize papers, analyze data, or explore new topics.
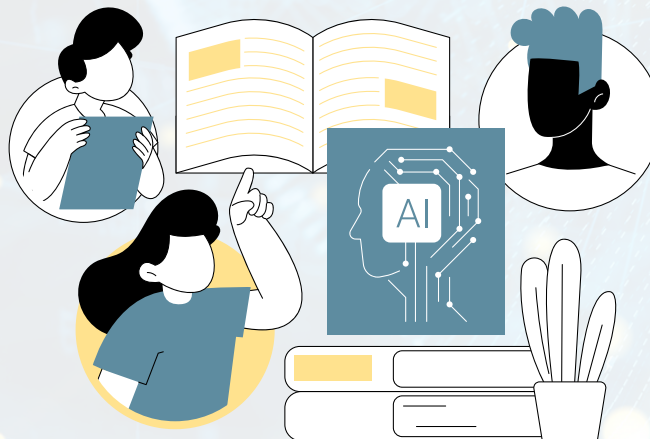
Scan or click the QR code to learn more about AI in Education

Teaching Smarter with AI

This page is brought to you by the Belmont University Teaching Center

Many students are eager to use AI to enhance their learning. To support this, thoughtful curricular design is essential to help them engage with AI critically, responsibly, and effectively.

Center Humanity

Clarify core learning competencies and ensure that students are responsible for these competencies in summative assessments.

- Design AI-supported learning activities that preserve core learning competencies.
- Speak with students about the value of intellectual challenge or struggle in learning and growth.

Cognitive Offloading

AI tools can support learning, but overuse may limit students' ability to think critically and creatively. This is called **cognitive offloading**—when students rely on tools instead of thinking for themselves.

To support responsible use of AI in the classroom:

- Use tools **with** students, providing careful guidelines for responsible tool usage.
- **Discuss** with students how and why responsible tool usage supports core learning competencies.
- **Clarify** context for students. Some tasks are suitable for offloading in certain courses and not in others.

Authentic Assessments for Meaningful Learning

- Use assessments that reflect real-world challenges.
- Assign tasks like presentations, critical thinking, and creating deliverables.
- Include reflection to connect learning to life beyond the classroom.
- Encourage collaboration and offer flexibility to support diverse learners.

Use SAMR to explore how to integrate AI

THE SAMR MODEL
Dr. Ruben R. Puentedura

S SUBSTITUTION
Technology acts as a direct substitute, with no functional change

A AUGMENTATION
Technology acts as a direct substitute, with functional improvement

ENHANCEMENT

M MODIFICATION
Technology allows for significant task redesign

R REDEFINITION
Technology allows for the creation of new tasks, previously inconceivable

TRANSFORMATION

Scan or click the QR code to gain more insight on AI in Education

Ethics and Accountability

AI Accountability: Building Responsibility

The rapid adoption of AI has created an **accountability gap**—a shortfall in expertise, oversight, and transparent policies. Progress won't wait, so we must build responsibility as we go.

Think of AI accountability as a **maturity model**. Start simple and build toward more informed decisions:

The Accountability Pathway

1. **Where & What:** Inventory the AI systems you use.
2. **Why:** Define the benefits and weaknesses of each use.
3. **Risk:** Identify potential adverse outcomes (e.g., bias, errors).
4. **Mitigation:** Plan how to reduce the likelihood or impact of risks.
5. **Principles:** Establish core rules for ethical AI use.
6. **Audit:** Check your compliance with your principles.
7. **Enforcement:** Commit to adhering to your guidelines.
8. **Assessment:** Review and adjust your principles regularly.

Using AI with Integrity: Your Ethical Compass

Think of ethics as your personal compass for using AI wisely—it's your guide to being honest, fair, and responsible.

Start Here: Know Your Community's Rules

- **For Students:** Your syllabus and honor code are your first guide. It's unethical to ignore them. When in doubt, ask your instructor.
- **For Everyone:** Follow your organization's policies. Understanding the reasoning behind rules helps you apply them wisely.

Quick AI Ethical Use Checklist

Policy: Does this follow my school/organization's rules?

Transparency: Am I clearly crediting AI assistance?

Accuracy: Am I verifying AI-generated information?

Privacy: Am I sharing ANY private or sensitive info?

Fairness: Could this output be biased or unfair to others?

Learn more about Responsible AI by scanning or clicking the QR code

AI & Data Privacy: Protecting Yourself and Your Work

AI is rapidly becoming a critical part of our jobs, offering incredible tools for productivity and creativity. It's tempting to upload documents to get the best results. But before you share, pause and consider: **What are you sharing, and who else might see it?**

The data you handle—**student records, research, internal documents**—is often sensitive, confidential, or proprietary. Protecting it isn't just a best practice; it's a core responsibility.

Why Caution is Critical: Understanding the Risks
When you input data into a public AI tool, that information may be:
- **Stored** on servers you don't control. **(Risky)**
- **Used to train** the AI model, potentially becoming part of its knowledge base and reflected in outputs to other users. **(Really Risky)**
- **Extracted** or exposed in a data breach. **(Super Risky)**

The consequences of mishandling data can be severe, leading to:

- **Loss of Intellectual Property:** Your unique research or proprietary ideas could be compromised.
- **Regulatory Non-Compliance:** Violating laws like FERPA (for student data), HIPAA, or GDPR, resulting in significant penalties.
- **Loss of Trust:** From students, colleagues, research participants, and the public.
- **Financial & Legal Risk:** Lawsuits, fines, and reputational damage.

Learn more about AI & Privacy by scanning or clicking the QR code

Data Protection: Your Action Plan

You don't have to avoid AI—you just need to use it wisely. Empower yourself with these steps:

Be Aware of the Terms of Use

- Always assume your inputs are **not private**. The terms of service for most public AI tools are very clear. For example, from xAI's terms:
  - "You grant us… an irrevocable, perpetual… royalty-free, and worldwide right… to use, copy, store, modify, distribute, reproduce, publish… your content."
- **The Good News:** Many services now offer an **opt-out** for sharing. This is often buried in your account settings. **Always look for this option and enable it**. It's a critical first step to protecting your data.

Adopt a "Better Safe Than Sorry" Mindset

- **Never input:** Personally Identifiable Information (PII), student grades/records, confidential research data, proprietary business information, or anything you wouldn't post on a public bulletin board.
- **Use de-identified data:** For testing or analysis, remove all identifying details first.
  - Use generic placeholders like **"[Student Name]"** or **"[Company X]".**
- **Leverage enterprise tools:** If your institution has licensed enterprise versions of AI tools (e.g., Copilot for Microsoft 365, ChatGPT Enterprise), **use them.** These versions are designed with higher privacy standards and often promise that your data will **not** be used for training.

Become a Champion for Privacy

- **Defend Yourself:** Make these checks a habitual part of your workflow.
- **Educate Others:** Share this knowledge with your peers, students, and team. Protecting our community's data is a shared responsibility.

Learn more about Data Protection by scanning or clicking the QR code

Key Takeaway:
AI is a powerful ally. By understanding the implications of data sharing and taking simple, proactive steps, you can harness its power with confidence, security, and integrity.

Handling Sensitive Data in AI Tools

Using public AI platforms for sensitive or proprietary data carries **serious risks**. Even simple actions—like pasting text, uploading documents, or granting access to private sources—can expose confidential information.

Once submitted, you **lose control of the data**. Many platforms use it to train their models, meaning your information could be retained and potentially revealed in future outputs. Additionally, platform policies may allow data sharing with third parties or use for advertising and product development.

Always be mindful that these tools should be treated as public spaces, and handle all data accordingly.

AI Policy:

Belmont University is actively developing a new version of the AI Policy, which will provide additional clarification and direction.

Sensitive Data:

Any use of AI that involves sensitive university data—such as names, intellectual property, budget information, grades, or similar—**must** be conducted through your **Belmont Microsoft Copilot** account. If you don't see this shield logo in the corner, do not upload sensitive university data.

Personal Subscriptions:

Faculty may use any AI tool at their own expense; however, the **Sensitive Data Rule still applies** when sensitive university data is involved.

University Purchases

Any AI tool that the university is funding (e.g., purchasing card) or licensing must be approved by IT. The **Sensitive Data Rule still applies** to this tool (i.e., don't upload).

Keeping Up

AI is evolving fast, with new tools and techniques emerging almost daily. Staying current can feel like a full-time job. To keep up, seek insights from AI experts, both generalists and specialists in your field.

Social Media
Social media platforms provide real-time updates, community engagement, and trend spotting. Follow AI researchers, power users, companies (e.g., OpenAI), and labs (e.g., DeepMind).

Podcasts
Podcasts offer in-depth discussions and expert interviews on technology, AI applications, and news. Search for your favorite podcast app for the top programs.

Blogs
Blogs offer long-form analysis and detailed general and domain-specific uses. Substack hosts a range of AI experts who post actionable insights.

Stay engaged with the evolving world of AI by connecting with the **Belmont Data & AI Collaborative**. BDAIC is a great resource for exploring ideas, building skills, and joining a community of curious minds.

You can stay updated and reach out to us via LinkedIn, Instagram, Email, or by visiting our website!

Scan or click the QR code to explore more AI resources