

The Bridge



UNIVERSITY OF
PLYMOUTH



University of
Salford
MANCHESTER

Human-Centred AI for KTP Practical Approaches for Purposeful Use

KTP@50 Conference | 29th October 2025

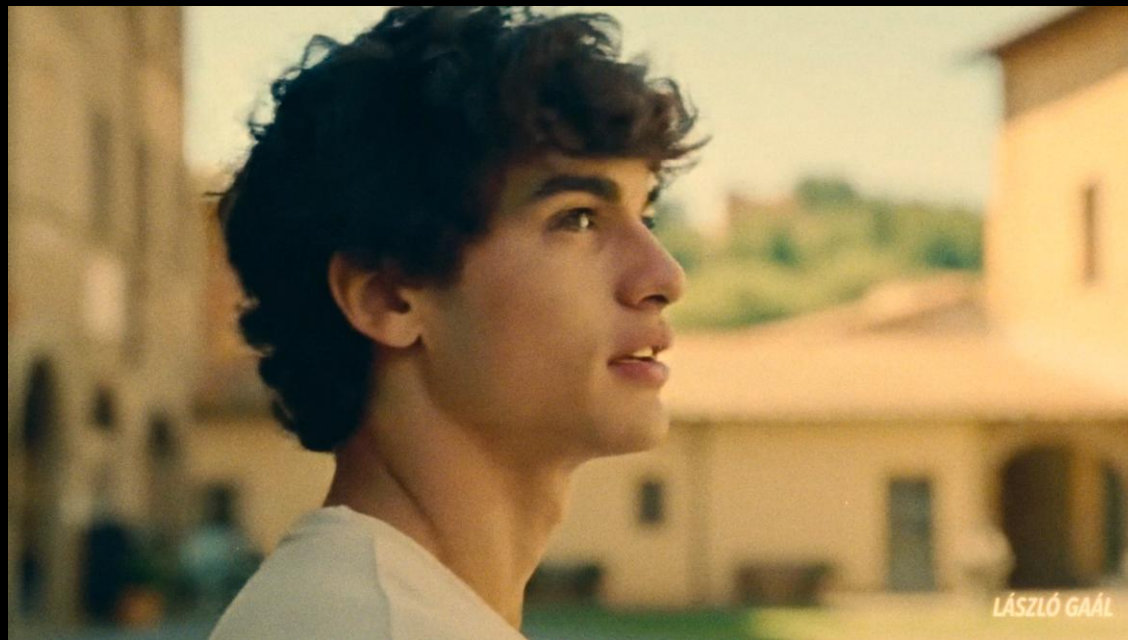
✉ rupert.lorraine@plymouth.ac.uk

✉ a.d.leonard@salford.ac.uk

Today's Journey

- ✓ Making Sense of AI
- ✓ Large Language Models (LLMs)
- ✓ Guiding AI Effectively
- ✓ Applications in KTPs
- ✓ Effective Prompting
- ✓ Advanced Tools
- ✓ Wrap-Up & Reflection





Google DeepMind Veo 2 | Credit: László Gaál

Flux | Credit: Dallin Mackay

User



Make this tube, but in pink glass version

Model response



Large Language Models (LLMs)

- Systems like ChatGPT (fastest growing consumer application in history)
- Use a Generative Pre-trained Transformer algorithm and 'deep learning'
- To generate human-like text for a wide range of tasks
- How does it work?
 - Predicts the next word in a sequence (like autocomplete)
 - Understands the context of your inputs (prompts)
 - Trained on a massive dataset (almost the entire internet)
- Learn more:
 - [The busy person's intro to LLMs](#)
 - [Deep dive into LLMs like ChatGPT](#)

What an LLM *is* (the mental model)

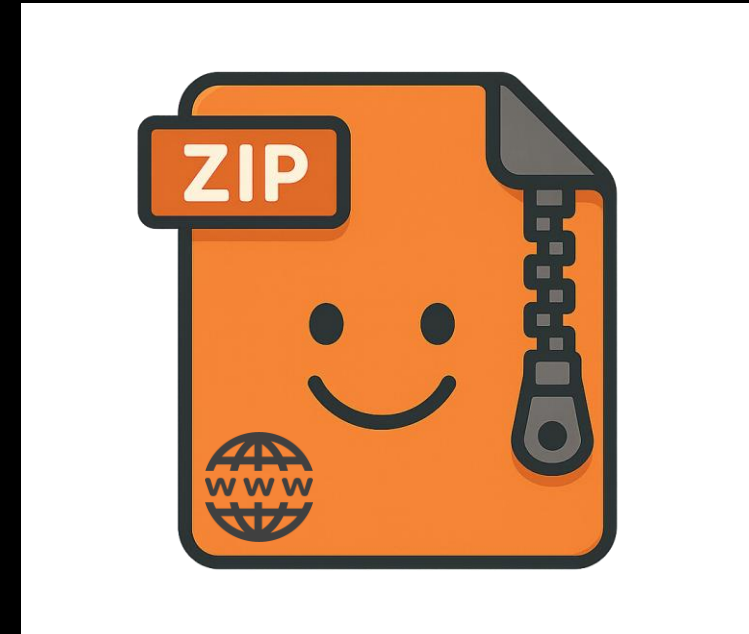
Compressed Knowledge

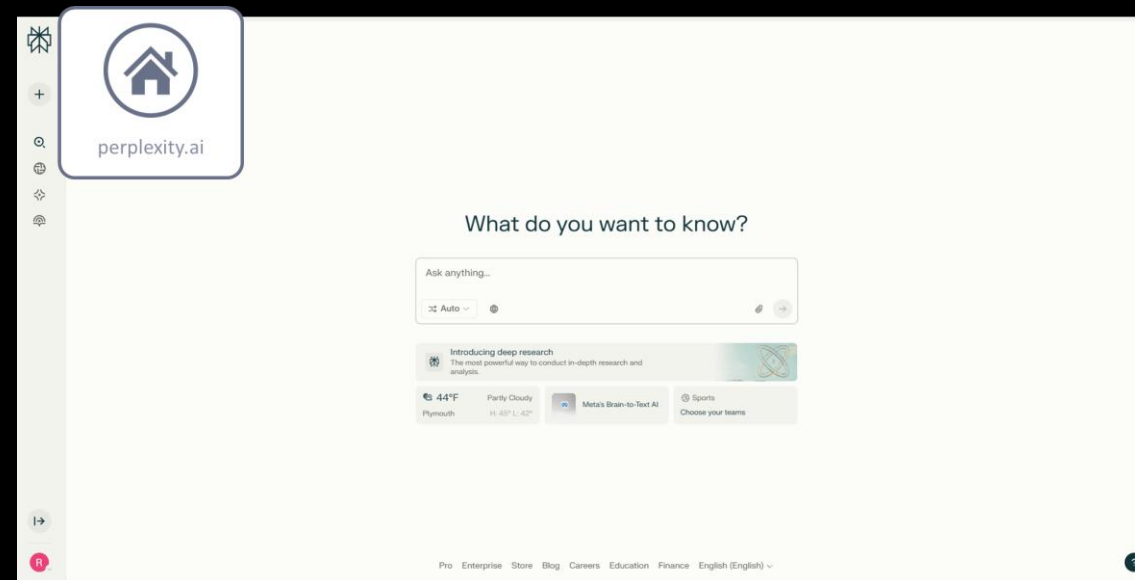
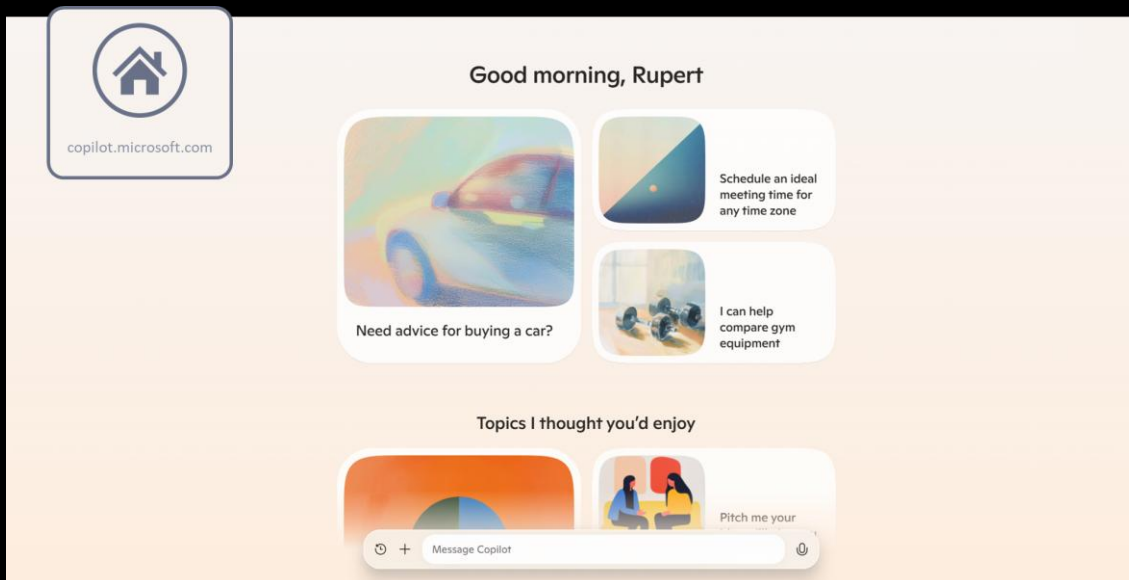
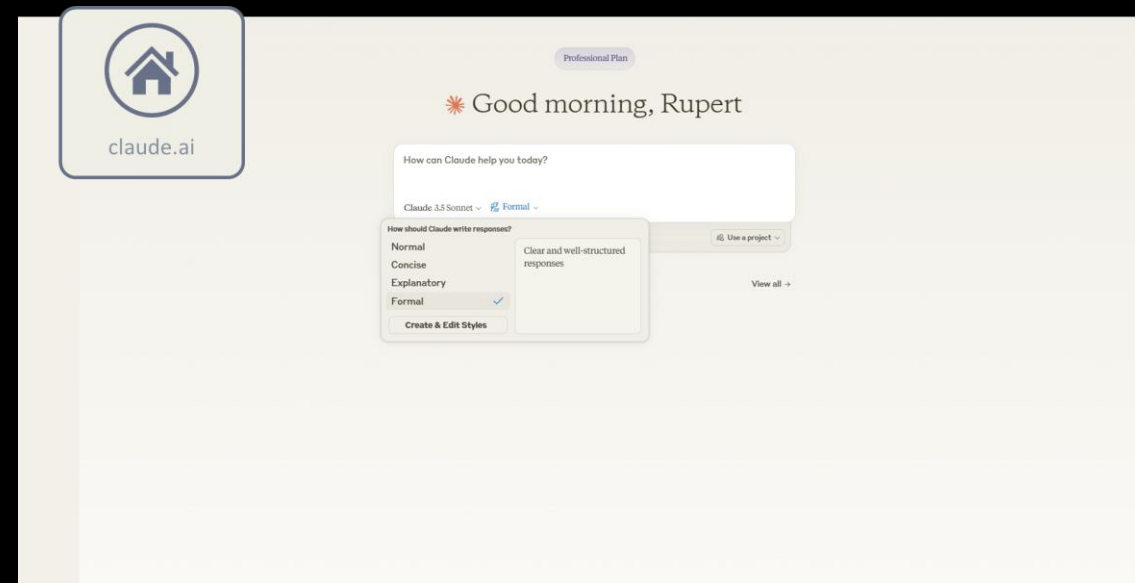
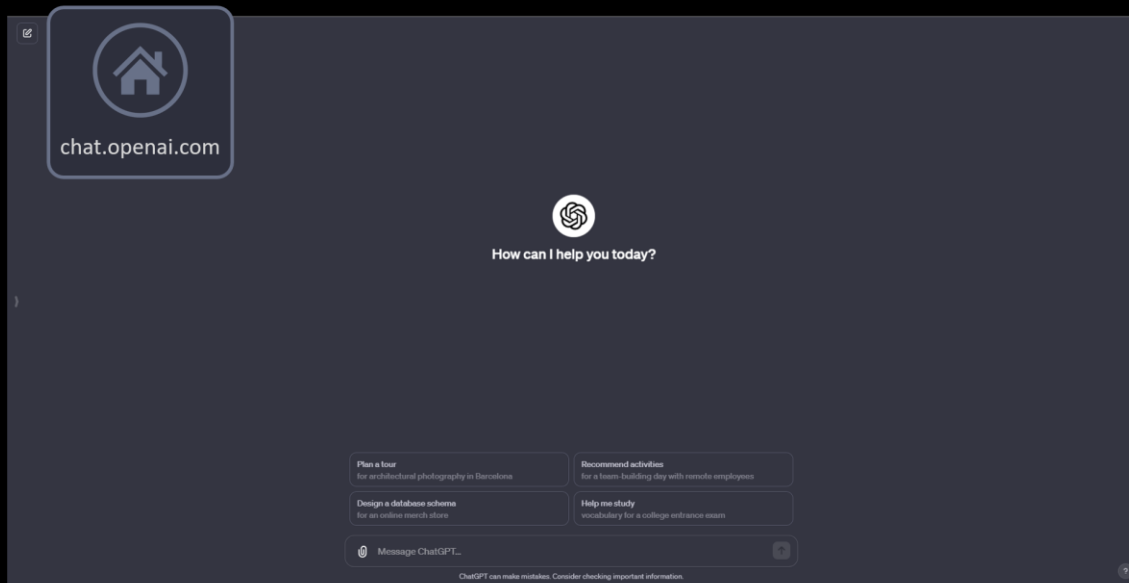
AI is like a zip file of the entire internet - represented as patterns instead of words, with a chat window stuck on the front so you can talk to it.



What an LLM *is* (in practice)

- 📅 Their knowledge is usually a few months out of date.
- 🔧 Some can use tools - browsing, coding, reasoning, research.
- 💬 You can interact in different ways - text, voice, files.
- 🧠 Memory and customisation - preferences, history, tailored behaviour.





What an LLM *is* (the mental model)

A versatile tool

Like a powerful Swiss Army Knife in the realm of information processing and understanding, AI has a wide variety of functionalities.



How it *behaves* (its “personality”)

Your Biggest Fan

AI is always encouraging - it builds on your ideas, but rarely challenges them.



Power and *responsibility* (amplify wisely)

Unlimited Interns - but...
Like having many eager helpers.
But they need direction - and
someone to check their work.



Guiding AI

Thought Leader (You)

- Sets the vision and strategy
- Makes critical decisions
- Brings deep disciplinary knowledge *and* rigour
- Applies emotional intelligence and ethical reasoning
- Guides AI with clear intent




Thought Partner (AI)

- Generates ideas and insights
- Analyses data and identifies patterns
- Challenges assumptions with alternative perspectives
- Supports creative problem-solving

Key Takeaways:

- *Leaders ask the right questions, AI helps illuminate the answers*
- *You are always responsible and accountable for using the output of an AI system*

Pause & Reflect (5 mins)

-  *How is this framing of AI landing with you so far?*
-  *What ways are you currently using AI in KTP?*
-  *How are you feeling about AI becoming more integrated into your work*



Next: we'll shift from 'framing AI' and how to guide it effectively, into *what it can actually do for us* in KTP contexts.

General Applications

- Brainstorming Ideas “Generate 10 ideas for...”
- Content Writing “Write a blog post about...”
- Researching “Summarise the key points of...”
- Learning “Explain the concept of...”
- Planning “Use [a particular technique] for [my project]...”
- Problem-solving “List possible solutions for...”
- Communication “Draft an email to...”
- Designing “Describe a design for...”
- Decision-making “Consider the pros and cons of...”
- Summarising “Outline the key points of [my text]...”
- Role Play “Act as [a particular role] to [achieve a goal]...”

Innovation & Business Impact

- Product design “Generate three eco-friendly packaging prototypes with different materials...”
- Process optimisation “Map workflow inefficiencies and propose leaner alternatives for production...”
- Market insights “Analyse customer reviews to identify emerging unmet needs in our sector...”
- Competitor analysis “Summarise the main strategies of five UK competitors in offshore renewables...”
- Sustainability “Draft a carbon reduction plan aligned with net-zero commitments...”
- Customer experience “Reframe user feedback into actionable design improvements for our service...”
- Scenario planning “Model three regulatory change scenarios and their impact on our business...”
- IP awareness “Summarise recent patents in marine robotics relevant to our KTP project...”
- Prototyping “Translate a concept sketch into a technical specification for testing...”
- Cost modelling “Estimate potential cost savings from adopting an AI-driven supply chain tool...”
- New markets “Assess opportunities for exporting our service to EU markets post-2025...”
- Impact metrics “Outline three metrics to evidence the long-term impact of our KTP project...”

Partnerships & People

- Associate support “Draft onboarding guidance to help a new Associate integrate quickly...”
- Staff training “Convert project outputs into training modules for company staff...”
- Knowledge transfer “Adapt research findings into practical tools for everyday use...”
- Steering groups “Draft briefing notes for a KTP project steering committee meeting...”
- Internal comms “Outline a communications plan to support adoption of new practices...”
- Progress reporting “Summarise outcomes into KPIs for Innovate UK progress reports...”
- Policy fit “Map project outcomes to SDGs and KTP programme priorities...”
- Project tools “Design a shared dashboard to track milestones and responsibilities...”
- Public outputs “Produce a plain-English explainer for the company’s final KTP impact report...”
- Career development “Suggest a professional development plan for the Associate’s career...”
- Responsible practice “Embed guidance on ethical AI use within project documentation...”
- Sustainability “Propose actions to sustain knowledge and capability after KTP completion...”

Proposal & Funding Success

- Application drafting “Draft a first-pass project plan based on company challenge notes...”
- Case studies “Summarise three past KTPs relevant to our sector for use in an application...”
- Impact evidence “Extract company data to demonstrate growth potential in the KTP proposal...”
- Partnership fit “Highlight the knowledge base strengths aligned to the company’s needs...”
- Funding calls “Summarise Innovate UK’s latest thematic priorities in plain English...”
- Risk register “Outline likely project risks and propose mitigations for the bid...”
- Budget planning “Draft an initial financial breakdown aligned to KTP contribution rules...”
- Reviewer lens “Pre-empt panel critiques by stress-testing the proposal language...”
- Value proposition “Translate technical outputs into a business value statement...”
- EDI case “Suggest strategies to embed diversity and inclusion in the KTP application...”
- Policy alignment “Map project aims to government innovation strategy language...”
- Success factors “List the three most common reasons KTP proposals succeed or fail...”



ChatGPT 5 ▾



What's on the agenda today?



industrial_strategy_policy_paper.pdf ×

PDF



Manchester-Met-Strategy-Booklet-20... ×

PDF

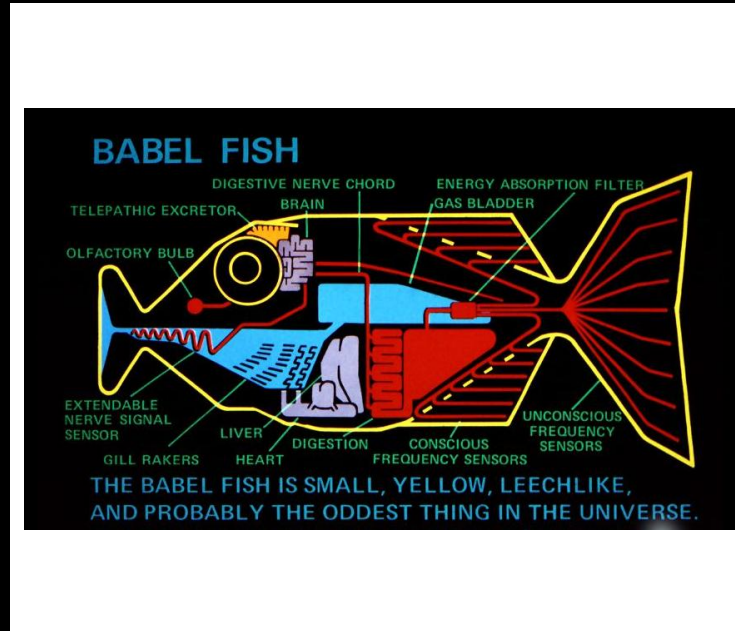
I'd like your help designing a business engagement campaign for Manchester Metropolitan University (MMU) that showcases its expertise in Creativity & Culture, Sport & Health, Sustainability & Net Zero Carbon, and Tackling major social challenges. The campaign should align with the UN SDGs as well as national and regional policy contexts (e.g. the UK Industrial Strategy and MMU's Road to 2030 strategy). Use these clusters and frameworks as background.



What it can *do* (capabilities you'll use)

Translator

AI doesn't just translate languages - it shifts tone, format, and audience too.



What it can *do* (capabilities you'll use)

Clone Tool

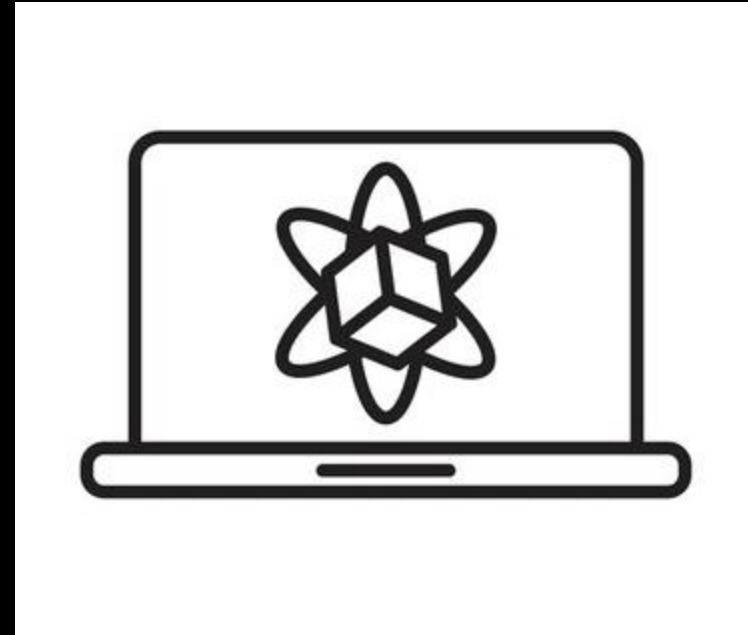
AI can clone style and tone -
adapting to different voices,
contexts, and formats.



What it can *do* (capabilities you'll use)

Simulation Machine

AI can simulate how people might think or act - from colleagues to partners and other stakeholders.



Structuring Effective Prompts

Context → Role → Interview → Task

1. Context Clearly explain the situation or challenge
2. Role Assign AI a relevant role or expertise
3. Interview Instruct AI to ask clarifying questions (if needed)
4. Task Define the desired outcome or deliverable

“I’m supervising a KTP Associate working on a digital health innovation project and want to maximise their professional development. Act as an expert in health innovation careers and graduate pathways. Ask three questions to clarify their skills and aspirations. Then suggest three structured, practical routes that strengthen their expertise, deliver value for the business partner, and sustain long-term links with the university.”

Structuring Effective Prompts

Context → Role → Interview → Task

1. Context
2. Role
3. Interview
4. Task

“I’m supervising a KTP Associate working on a digital health innovation project and want to maximise their professional development. Act as an expert in health innovation careers and graduate pathways. Ask three questions to clarify their skills and aspirations. Then suggest three structured, practical routes that strengthen their expertise, deliver value for the business partner, and sustain long-term links with the university.”



ChatGPT 5 ▾



Ready when you are.

I'm supervising a KTP Associate working on a digital health innovation project and want to maximise their professional development. Act as an expert in health innovation careers and graduate pathways. Ask three questions to clarify their skills and aspirations. Then suggest three structured, practical routes that strengthen their expertise, deliver value for the business partner, and sustain long-term links with the university.



How to *work with it* (*interaction patterns*)

Treat It Like a Human

The more natural and conversational your instructions, the better the AI performs.



How to *work with it* (interaction patterns)

Sparring Partner

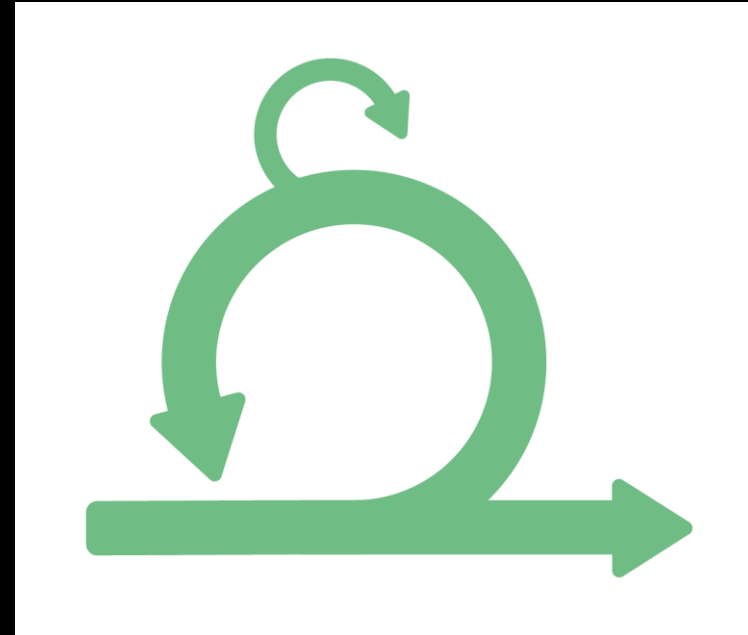
AI gives you a partner to bounce ideas off - the back-and-forth helps sharpen your thinking.



How to *work with it* (*interaction patterns*)

Iteration

AI thrives on refining drafts -
each loop makes the output
sharper and more useful.



Remember

Quick recap (good prompting practice):

- ✓ Be clear, specific, and purposeful
- ✓ Use **CRIT**: Context • Role • Interview • Task
- ✓ Try **meta-prompting**: “Rewrite this as a better prompt”

💭 *What kinds of prompts could you imagine trying to help your research?*



Next: we'll have a look at how to use tools like NotebookLM, features like Deep Research, multimodal inputs, and other capabilities to extend what AI can do for us, and then come on to the safety aspects...

Research Assistants ([NotebookLM](#))

- New class of AI tools designed to assist with research and analysis
- Chat with your sources, create learning materials, videos and podcasts

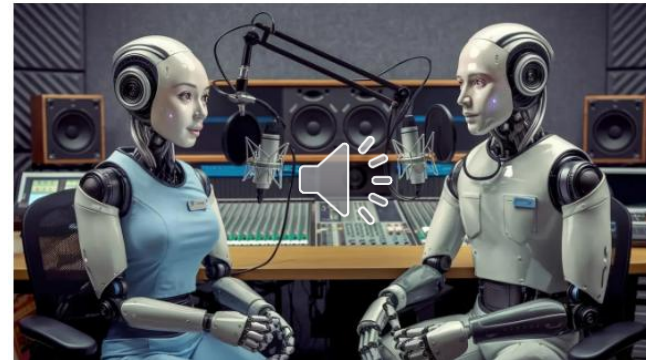
Understand **Anything**

Your research and thinking partner, grounded in the information you trust, built with the latest Gemini models.

Try NotebookLM

Your AI-Powered Research Partner

How To Create An AI Podcast About Anything In Seconds With NotebookLM



Sources

+ Add

Discover

Select all sources

IGM_Exec_Summary_Nov_22_1__63d0f877-c7fa-4c0f-a3...

Investing_in_success_An_Economic_strategy_for_Manch...

Manchester-Met-Strategy-Booklet-2022.pdf

gm-local-industrial-strategy-web.pdf

industrial_strategy_policy_paper.pdf

Chat

Manchester Metropolitan University: Road to 2030 Strategy

5 sources

The provided text consists of excerpts from the Manchester Metropolitan University's "Road to 2030" strategy booklet, outlining the institution's ambitious plans and priorities for the decade. The document clearly articulates the university's purpose and core goals, which center on providing excellent education and impactful research to transform lives. Supporting these goals are various enabling strategies focusing on areas such as creating a great place to work, fostering an inclusive culture, leading in sustainability and climate change, and increasing internationalisation and business engagement. The text also details specific targets to 2026 across key performance indicators like student satisfaction, research income, and carbon emission reductions, underscoring a commitment to building on the university's legacy and strong foundations within the city of Manchester.

Save to note

Video Overview

Audio Overview

Mind Map

Where do Manchester Metropolitan University's main research and innovation strengths most clearly align with the priorities set out in the various policy and strategy documents shared in the sources, and how could Knowledge Transfer Partnerships (KTPs) be positioned to address these overlaps? Please group the alignments by theme, and highlight areas where KTPs could also respond to employers' emerging innovation needs.

5 sources

How will the university's core goals of education and research be achieved by 2030?

What enabling strategies and invest

Studio

Audio Overview

Video Overview

Mind Map

Reports

Flashcards

Quiz

Studio output will be saved here.

After adding sources, click to add Audio Overview, Study Guide, Mind Map, and more!

Add note

NotebookLM can be inaccurate; please double check its responses.

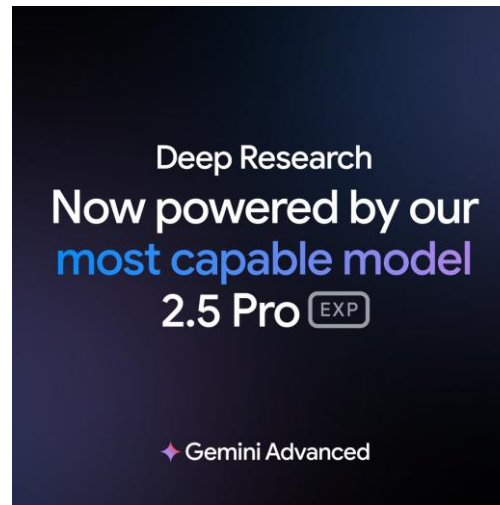
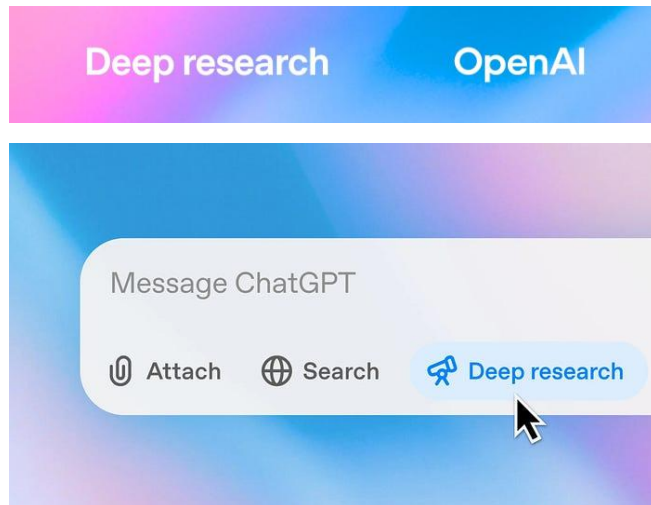
www.tinyurl.com/NBLMKTP

Manchester's Next Revolution



Deep Research ([OpenAI](#) | [Claude](#) | [Gemini](#) | [Perplexity](#))

- Combines reasoning with web search to explore complex questions
- Delivers evidence-based reports you can trace back to sources





ChatGPT 5 ▾



What's on your mind today?

I am a KTP practitioner at Manchester Metropolitan University preparing a project and I want to strengthen its inclusive design. I know I can't judge the accuracy of every piece of EDI advice myself, but I'd like to draw on the broad evidence base about inclusivity in Knowledge Transfer Partnerships (KTPs) and other university-business innovation mechanisms. Please translate this intent into a well-designed and structured query that follows GPT5 Deep Research prompt engineering best practices.

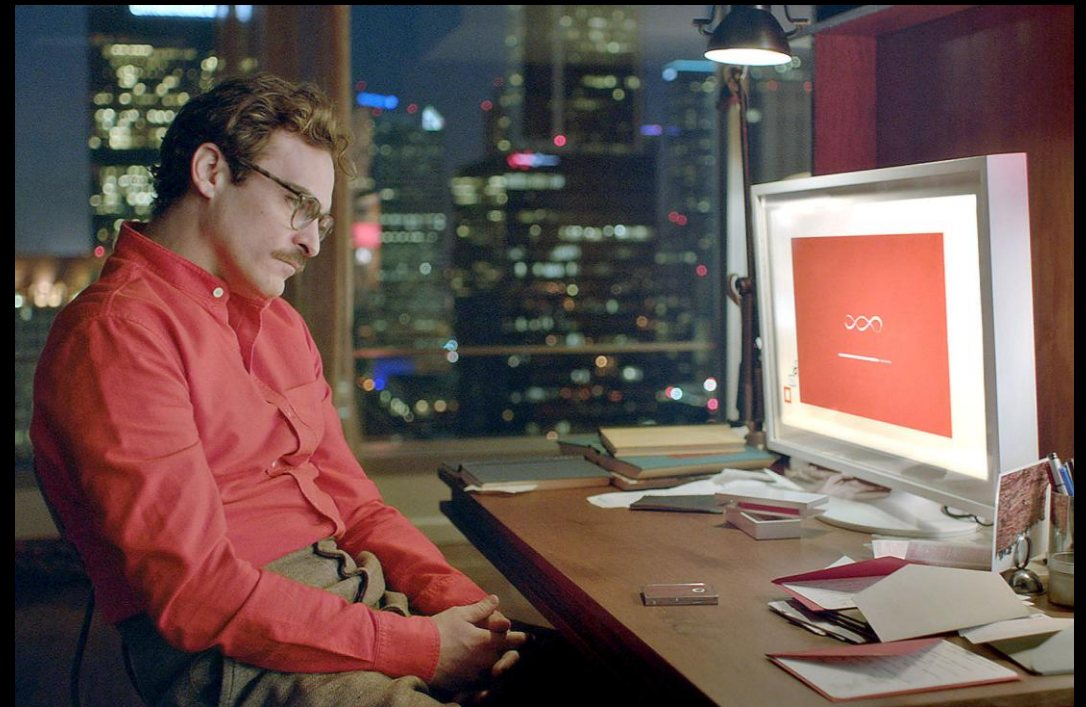
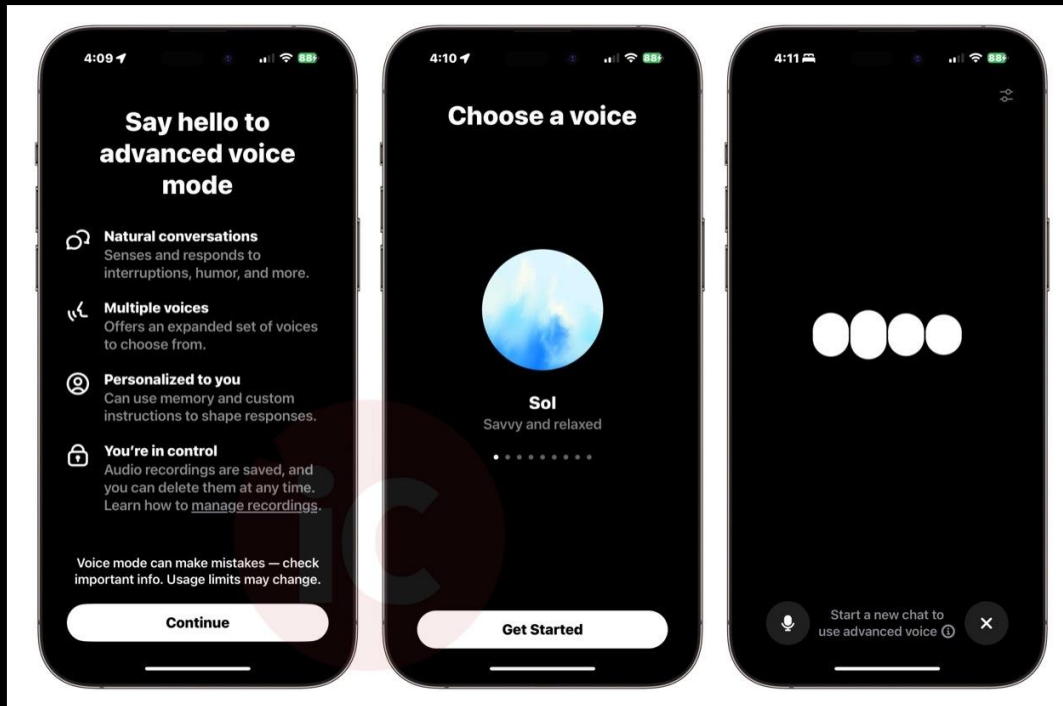
The prompt should:

- clearly define the research focus on barriers, inclusive practices, and innovation opportunities in KTPs and similar partnerships
- specify the type of output expected (structured synthesis, evidence, references, lessons for practice)
- be written in clear, professional language suitable for use in a research context.



Multimodal Models ([ChatGPT Voice](#) | [Gemini Live](#))

- Real-time interaction over vision, audio and text
- Speak to your AI assistant e.g. role-play challenging scenarios or meetings



www.tinyurl.com/GPT4odemos

Pause & Reflect (5 mins)

- ✨ *What's standing out most for you from today's session?*
- 🔍 *How is this shaping your sense of how AI could support KTPs in practice?*
- 🤔 *What questions or uncertainties are you taking forward into tomorrow?*



Tomorrow: *Beyond Automation - Rethinking Roles, Identity & Impact*
A reflective session on how AI is reshaping our roles and relationships in KTPs, and how it can support more creative, inclusive, and responsible approaches to knowledge exchange.

Conceptualising AI's Value and Impact

Productivity (Operational)

- AI automates 80% of routine tasks, allowing humans to focus on the critical 20% that require refinement and judgement.

Coaching & Creativity (Personal)

- AI enhances learning, confidence and communication by providing feedback and positive reinforcement, refining ideas, and supporting creative expression.

Leadership (Strategic)

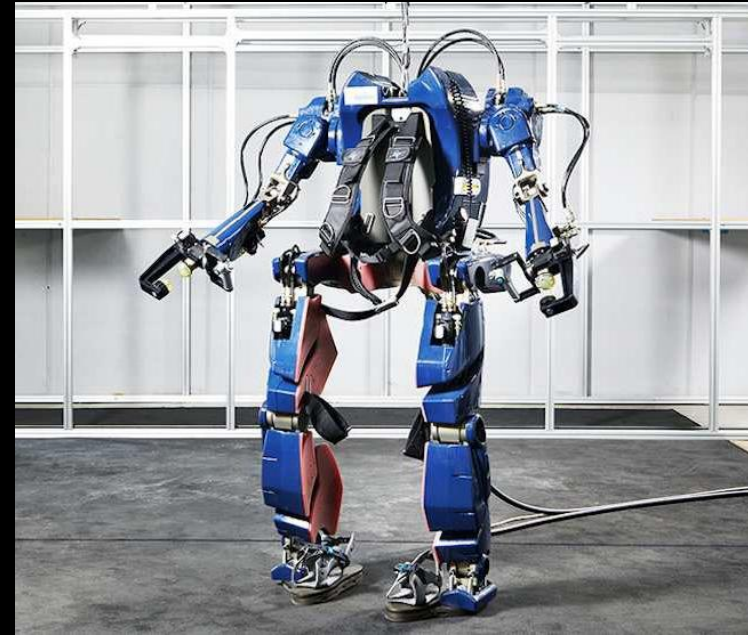
- AI acts as a strategic thought partner, helping us to challenge assumptions, explore new perspectives, and identify opportunities beyond human bias.



Power and *responsibility* (amplify wisely)

A Bionic Suit

Like an exoskeleton for thinking -
but one that amplifies both your
strengths and your weaknesses.



Power and *responsibility* (*amplify wisely*)

An Ecosystem of Tools

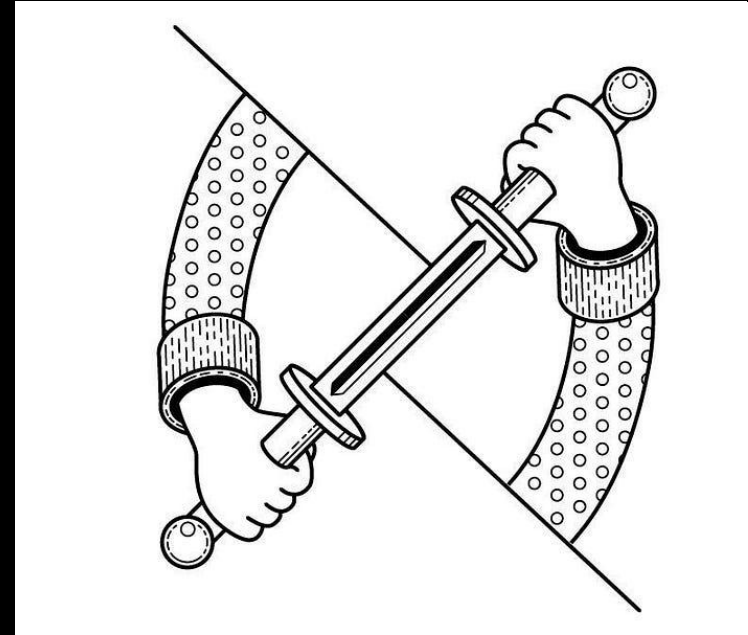
AI isn't just one system - it's a growing ecosystem of models, apps and plug-ins.



Power and *responsibility* (amplify wisely)

A Double-Edged Sword

AI can open up new capabilities and deliver amazing benefits, but it also creates new risks and drawbacks.



The Bridge



UNIVERSITY OF
PLYMOUTH



University of
Salford
MANCHESTER

Thank you!

- Personalised AI support available
- Please get in touch for further details



rupertlorraine



alexander-leonard-a54707216



rupert.lorraine@plymouth.ac.uk



a.d.leonard@salford.ac.uk