

# Exploring Connections: Six Degrees of Wikipedia - vs - GenAI

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***Please take a moment to provide feedback on the activity and the presentation:***  
***["Exploring Connections" feedback form](#)***

List A - Course Terms	List B - Random Terms
Resistor	Billie Eilish
Capacitor	Capybara
Inductor	Daft Punk
Op amp	Spiderman
Instrumentation amplifier	LeBron James
Signal processing	Impressionism
Capacitive coupling	Ocelot
Filter (signal processing)	Nefertiti
X-ray	Impressionism
Magnetic Resonance Imaging	Roger Federer
Pulse oximetry	Schrodinger's cat
Electrocardiography	Treaty of Versailles
Lithium-ion battery	Roman aqueduct
Biocompatibility	Polish Corridor
Food and Drug Administration	Welsh Corgi
Glucometer	Methuselah
Spirometry	Moby-Dick
Photoplethysmogram	Frank Lloyd Wright
Homeostasis	Octavia E Butler

## Round 1: Six Degrees of Wikipedia

1. Pick a term from List A, or choose a word/phrase that relates to biomedical instrumentation.
2. Pick a term from List B, or choose a word/phrase that interests you but does not have an obvious connection to biomedical instrumentation.
3. Enter those 2 terms into <https://www.sixdegreesofwikipedia.com/> site and explore any paths you find interesting.
4. Explain how the 2 terms are related. Show the path or Wikipedia links. If there was anything that you learned or that surprised you, reflect on those insights.



### Example for Six Degrees of Wikipedia Exercise:

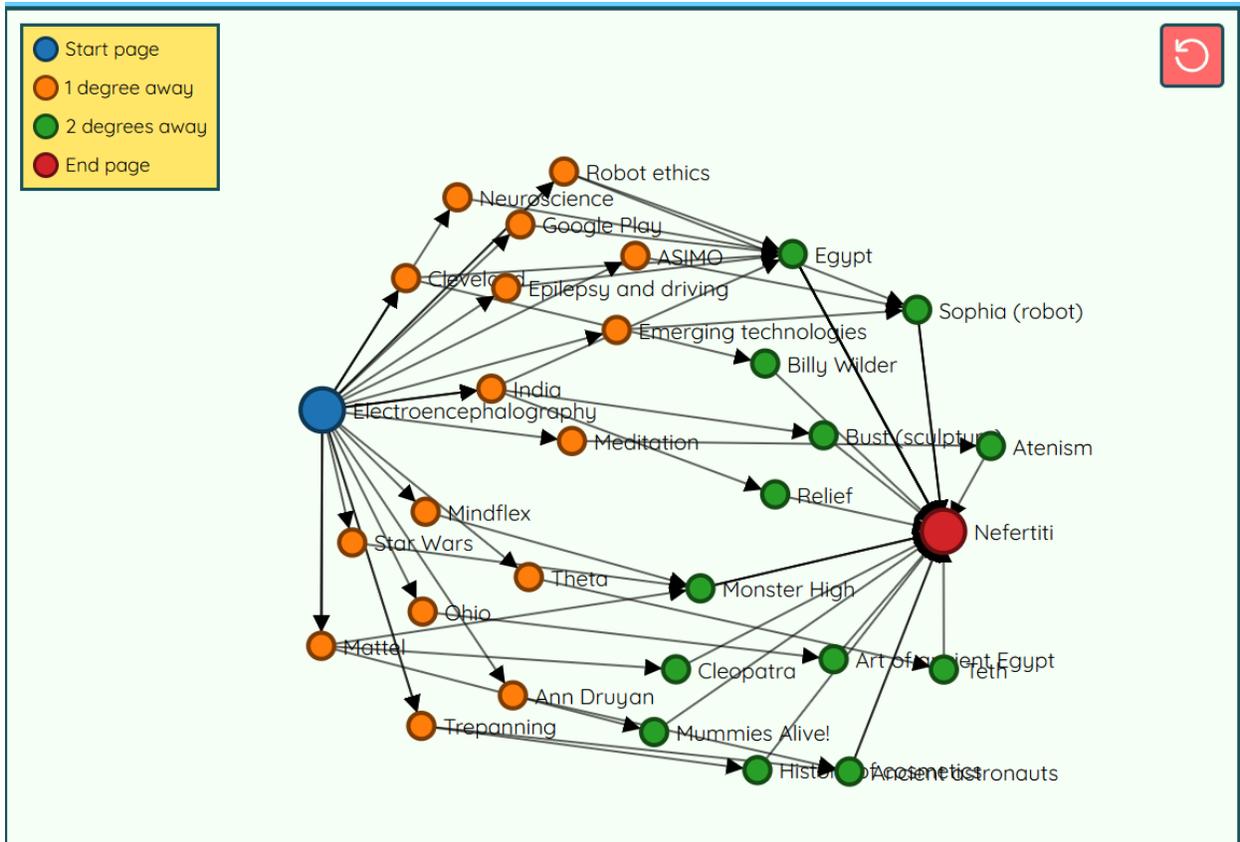
Find the shortest paths from

Electroencephalography

↕

Nefertiti

Go!



Starting with the “[Wikipedia: Electroencephalography](#)” page:

“In 2009 [Mattel](#) partnered with NeuroSky to release the [Mindflex](#), a game that used an EEG to steer a ball through an obstacle course.”

From the [Mattel](#) page:

“On June 11, 2010, Mattel launched [Monster High](#), a fashion doll line featuring the teenage children of famous and well-known monsters like [Dracula](#), [Frankenstein](#), [Cleopatra](#), [Gorgon](#), [Werewolf](#), and [The Mummy](#).”

From the [Monster High](#) page:

“[Cleo de Nile](#) (voiced by [Salli Saffioti](#)<sup>[13]</sup> from 2010 to 2018 and Kausar Mohammed from 2022 onwards) is the daughter of the [mummy pharaoh](#) Ramses de Nile, and is 5842 years old at the start of the series. She is the captain of the “[fearleading](#)” squad. Cleo prefers to accessorize with light-gold bandages or mummy wrappings. She is based on [Cleopatra](#), while her older sister, Nefera de Nile, is based on [Nefertiti](#). She is the queen of the social scene and has a boyfriend named Deuce Gorgon.”

**Personal Reflection:**

I didn't realize that a toy company like Mattel was interested in using EEG as a component for their toys. I found it interesting that Mattel started this work over 15 years ago. I looked more into the Mindflex game and found that one major criticism was that there were doubts whether the interface actually used EEG, or if the toy just randomly moved the ball and exploited the "illusion of control" phenomenon.

## Round 2: GenAI

1. Pick a term from List A, or choose a word/phrase that relates to biomedical instrumentation.
2. Pick a term from List B, or choose a word/phrase that interests you but does not have an obvious connection to biomedical instrumentation.
3. Ask a GenAI tool of your choice (ChatGPT, Claude, Google Gemini, Microsoft Copilot, Perplexity, Poe, etc) to find connections between those 2 terms. You may play with the prompt to try to generate a desired response (i.e., you may include a role in the prompt, or ask the GenAI to provide a response tailored to a particular audience, etc).
4. Reflect on your results and post to the discussion forum. In your post include:
  - a. AI tool used and the prompt
  - b. The text generated (if the AI tool enables sharing, you may just submit the link to the full conversation)
  - c. Your rating from insightful (five stars: ★★★★★) to nonsensical (one star: ★)
  - d. Your analysis of how well GenAI was able to connect your two terms (Which parts were fabricated? Which parts were accurate?)

## Additional Resources

📄 ASEE 2025 BED Showcase - Slides from ASEE 2025 BED Showcase

[https://nmdprojects.net/teaching\\_resources/ai\\_random\\_connections\\_exercise.html](https://nmdprojects.net/teaching_resources/ai_random_connections_exercise.html) - Jon Ippolito first introduced me to this "Exploring Connections" exercise using GenAI. He has instructions for the activity, as well as a list of random terms for instructors who want to try this activity with their classes. Full workshop, which includes an exploration of GenAI image tools, is available here: <https://myfest.equityunbound.org/events/how-can-generative-ai-make-new-things/>

<https://bit.ly/SkepticalAIresearch> - Anna Mills (College of Marin) provided a great introduction to teaching students how to approach AI research tools skeptically, with an emphasis on building

critical thinking skills. Full workshop is available here:

<https://myfest.equityunbound.org/events/skeptical-approaches-to-ai-research-tools/>