Should librarians teach AI in a scholar context?
Case of a workshop on ChatGPT-3.5 from the academic library to its community

Bibliotecas UC
Teaching and Research Support

UC | Chile

About me

Javier Oyarzun

Librarian

Head of Teaching and Research Support Librarian @ Biblioteca San Joaquín, Bibliotecas UC, Pontificia Universidad Católica de Chile.

I've also studied service and web design.

ioyarzunf@uc.cl > feel free to write me!

About UC Chile

30.500+ undergraduates

4.500+ postgraduates

1.300+ PhD students

2023

3.700+ Academic body

18 Faculties + Villarrica Campus

100+ Undergraduate programs

39 PhD programs

97 Master programs

About my area: Teaching and Research support

**533** sessions and workshops

**25** digital competences development focused contents

9.905 assistants (1.3% growth over last year (22-23 comparison)

2023

About this talk

This presentation highlights the essential role of academic librarians in guiding students through practical AI-prompting techniques. Librarians serve as knowledgeable guides, empowering the academic community to navigate and leverage AI technology effectively.
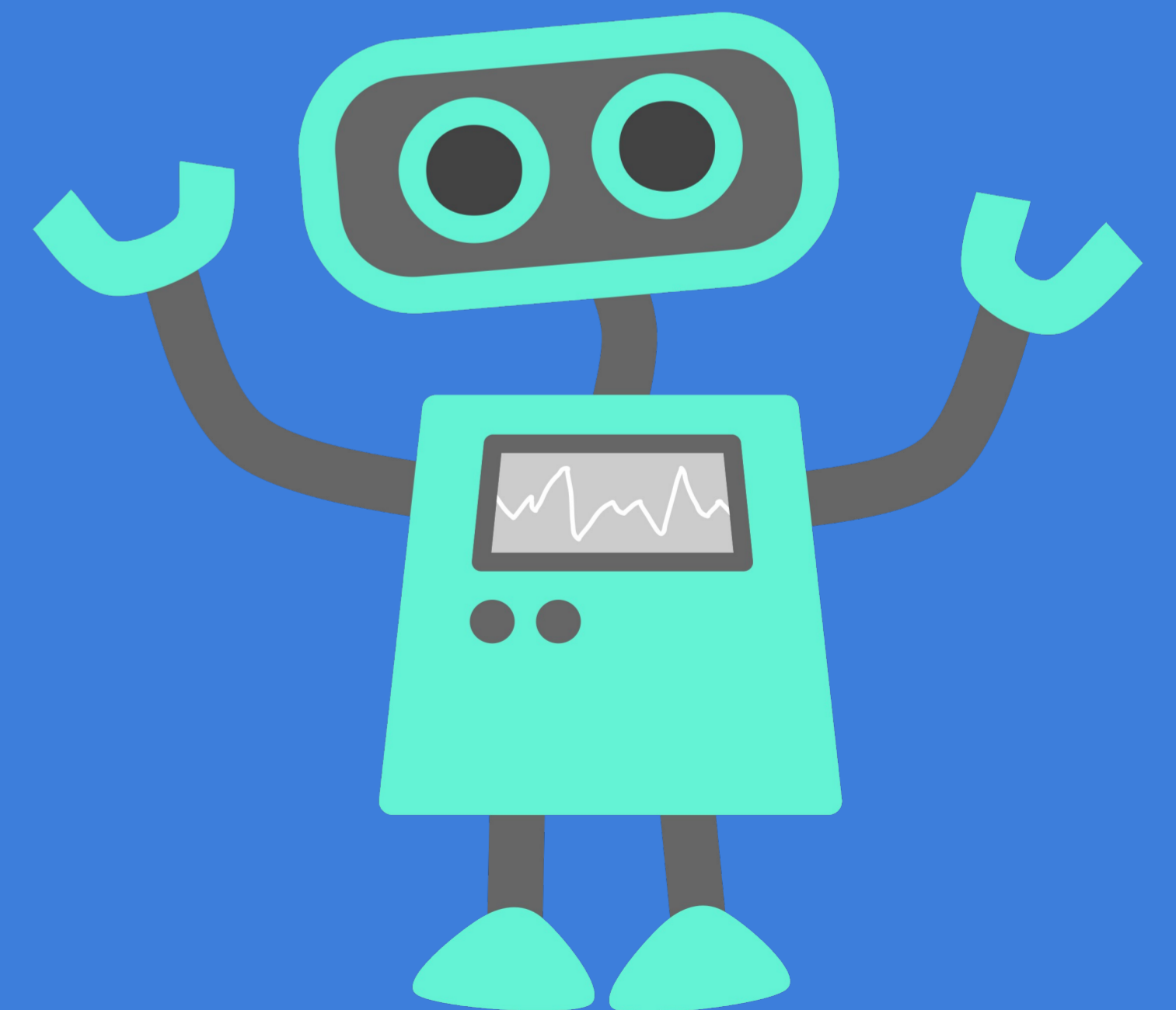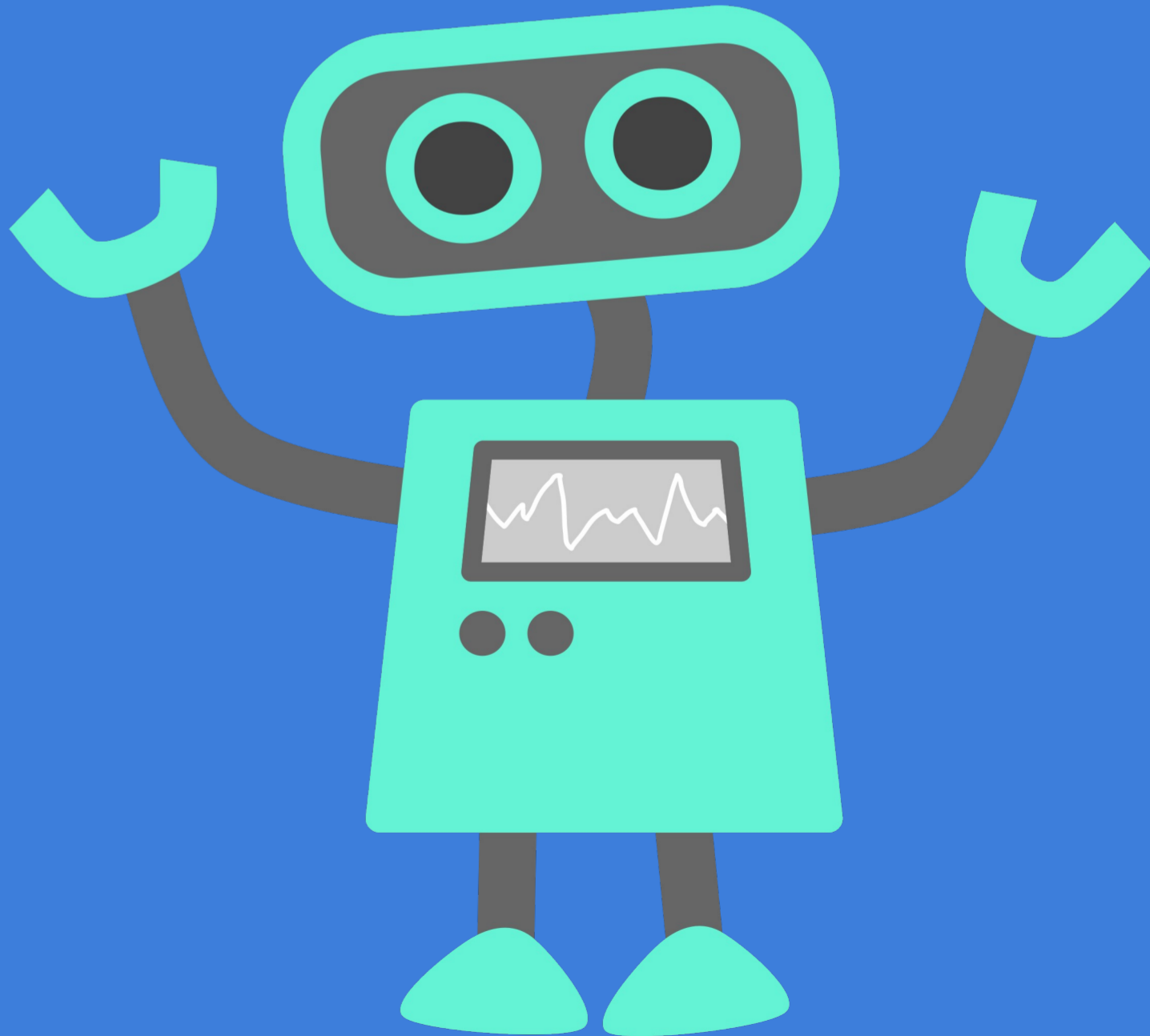
Attention to the following slides (purple ones)

The Role of Librarians in Teaching Generative Models

Librarians play a crucial role in teaching generative models like ChatGPT within their institutions. They can educate on AI tools, promote ethical use, assist in research, support information literacy, and collaborate with instructors. By actively engaging with generative models in educational settings, librarians can help users harness the potential of AI tools while promoting responsible and effective use within academic institutions.

by Javier Oyarzun

Key Roles of Librarians in Teaching Generative Models

1 — **Educate on AI Tools**

Librarians can provide training sessions or workshops to educate students, faculty, and staff on how generative models work, their capabilities, and limitations.

2 — **Promote Ethical Use**

Librarians can emphasize the importance of using generative models ethically and responsibly, discouraging plagiarism or academic dishonesty.

3 — **Assist in Research**

Librarians can guide users on how to effectively use generative models for research purposes, helping them navigate through the results and evaluate the generated content.

Supporting Curriculum Development and Advocating for Transparency

Supporting Curriculum Development

Librarians can collaborate with faculty to create assignments and projects that leverage generative models for educational purposes.

They can assist in designing activities that encourage students to engage with these tools in meaningful ways, such as creating infographics, podcasts, or videos.

## Advocating for Transparency and Ethics

Librarians can advocate for policies and guidelines that promote transparency, ethical use, and responsible practices when utilizing generative models in academic settings.

They can work with stakeholders to ensure that proper attribution and citation practices are followed.
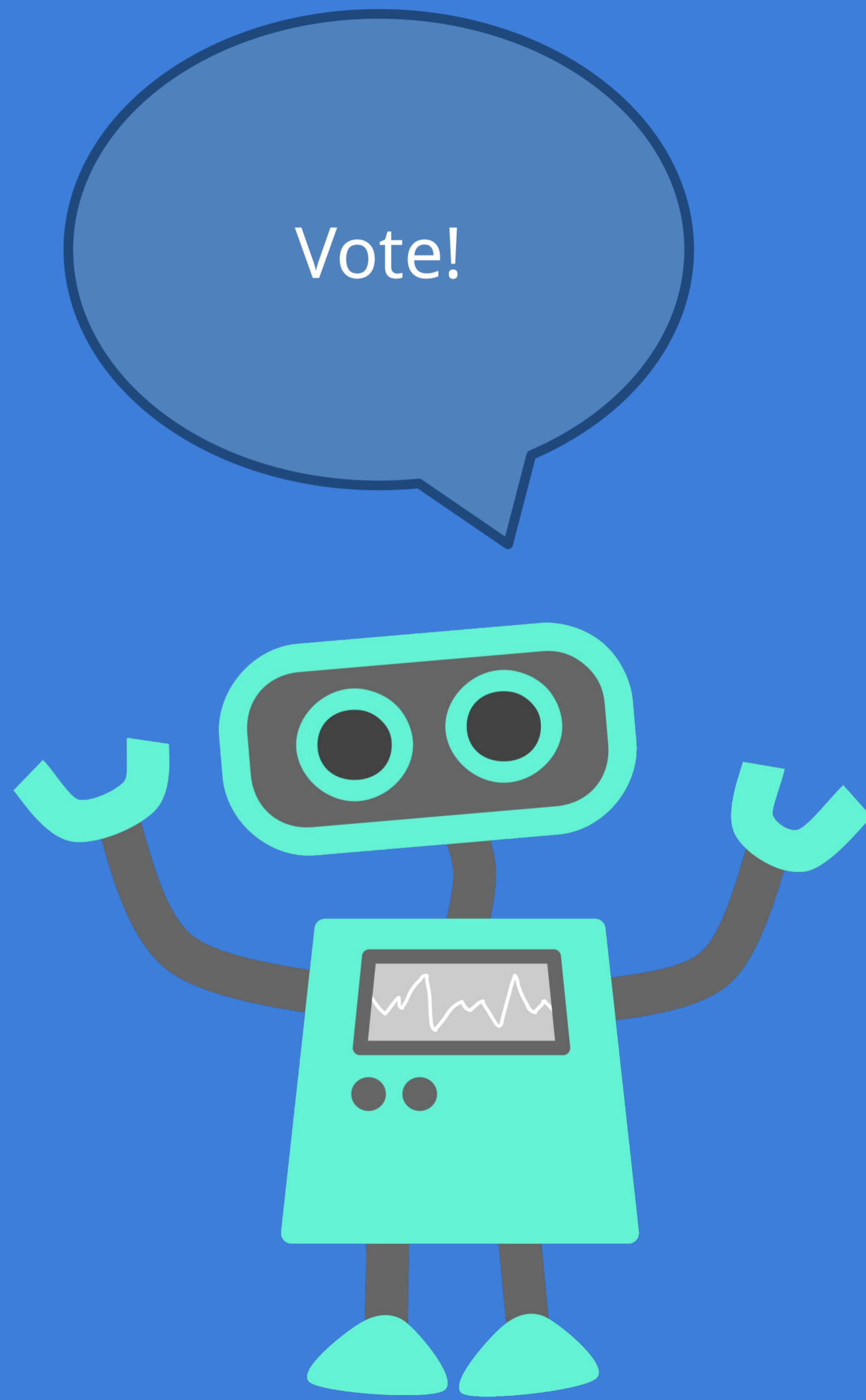
So, we offer help from the library with a work shop

Let's see!
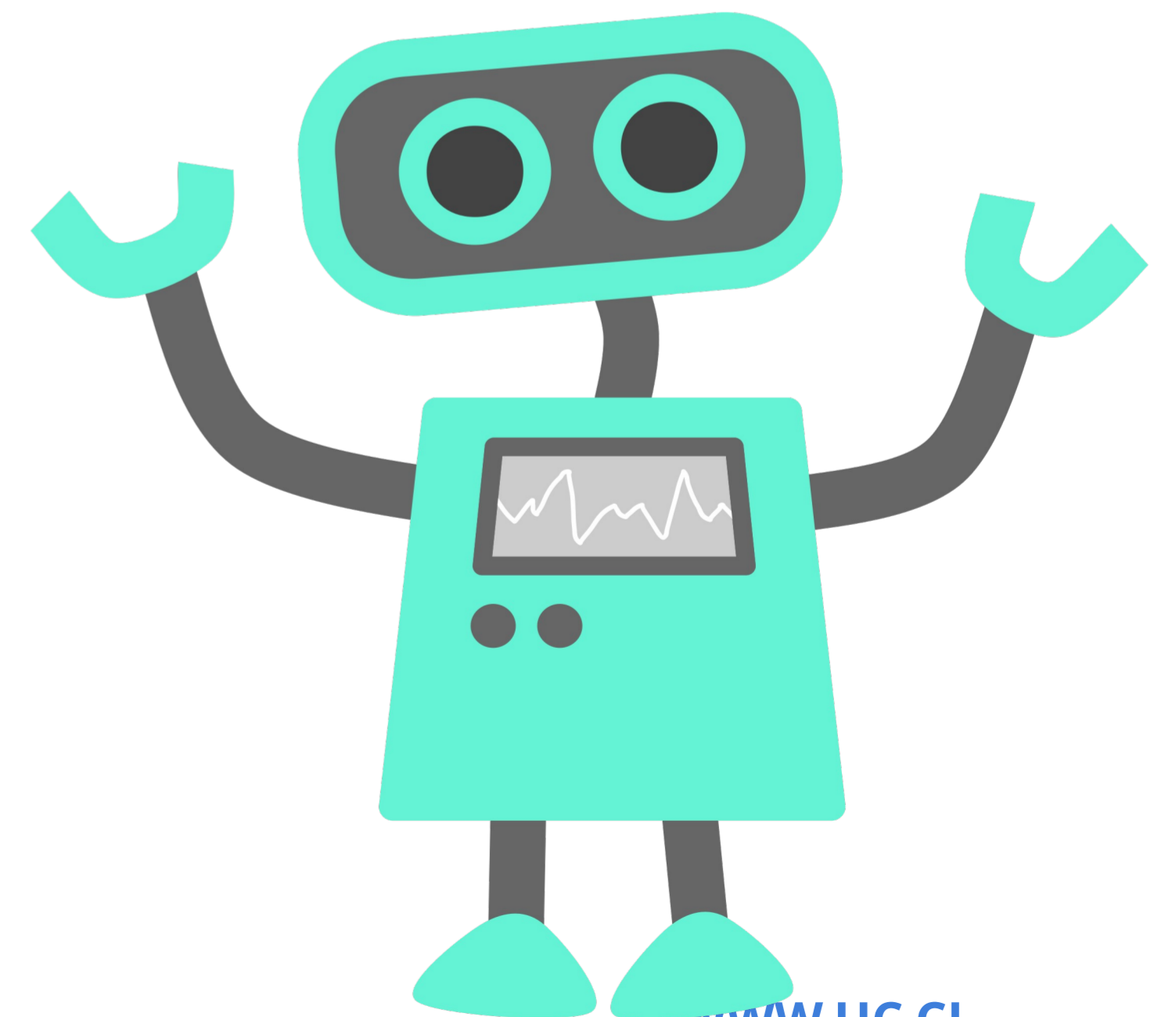
Prompt development

|		
Be respectful of linguistic norms	Adopt personas	Iterate instructions
Specify the format	Clear instructions	Ask for feedback and detail

How to put these tips into practice?

Examples

a) I need to explain what a prompt is to my six-year-old daughter.
b) I need to study for an English exam, and I would like to have a study partner to provide feedback on my knowledge.
c) I need to obtain a comma-separated values (CSV) file from a set of data in a Word document.

It's your turn!

a) Make the chat adopt a persona, e.g.: pharmacist, dentist, a cat. Detail the characteristics of that person.
b) In a simple prompt, ask them to create a numbered list on a topic of your interest.
c) Ask it to give you feedback on some doubts you have about its response and to provide you with the sources it used to elaborate.

Share your answers in the chat!
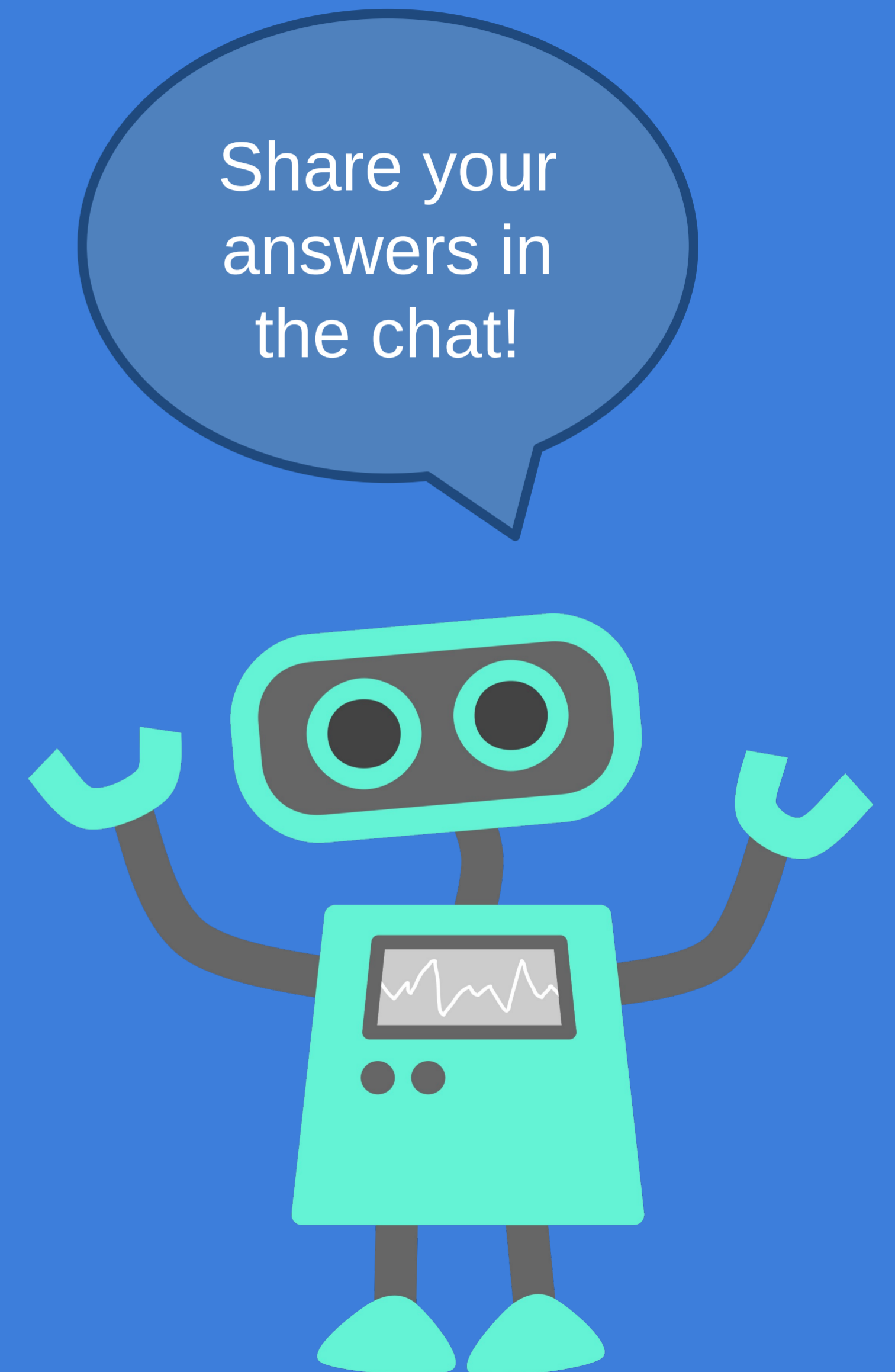
AI&IA: Artificial Intelligence and Academic Integrity

If you're using APA7 there's a way to cite conversations with ChatGPT, and it makes the following logic: what's being cited is not a conversation with a person but the product of an algorithm, which is an intellectual work. The author of ChatGPT is OpenAI, therefore, it would be correct to cite and reference like this:

Parenthetical citation: (OpenAI, 2023).
Narrative citation: OpenAI (2023).
Reference: OpenAI. (2023). ChatGPT (version Mar 14) [Large language model]. https://chat.openai.com/chat.
DALL-E. (2023). Microsoft Bing []. https://bing.com

Source and more information at: How to cite ChatGPT (apa.org).

When given a follow-up prompt of "What is a more accurate representation?" the ChatGPT-generated text indicated that "different brain regions work together to support various cognitive processes" and "the functional specialization of different regions can change in response to experience and environmental factors" (OpenAI, 2023; see Appendix A for the full transcript).

Reference

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. https://chat.openai.com/chat

Attention to the following slides (white ones)

AI Impact on Academic Libraries

AI integration is redefining the function and role of academic libraries.

by Javier Oyarzun

Enhancing Educational Tools

1 — **Efficiency**

Instant creation of syllabi and lesson plans.

2 — **Accessibility**

Potential for tutoring and student support.

3 — **Innovation**

Embracing AI fosters critical thinking and productivity.

Supporting Research and Innovation

1 **Research Guidance**

Assistance in identifying useful AI tools for research.

2 **Integrating AI**

Guidance on incorporating AI into research workflows.

3 **Information Literacy**

Integration of AI for accurate and pertinent content.

Professional Competence

| 1 | 2 |

Skills Integration

AI skills as a critical component of information literacy training.

Industry Success

Competence in AI distinguishing successful professionals.

AI's Role in Evolution

Adaptation

Librarians evolving with AI integration.

Transformation

Anticipating the evolution of academia.

Anticipating the Future

AI Expansion
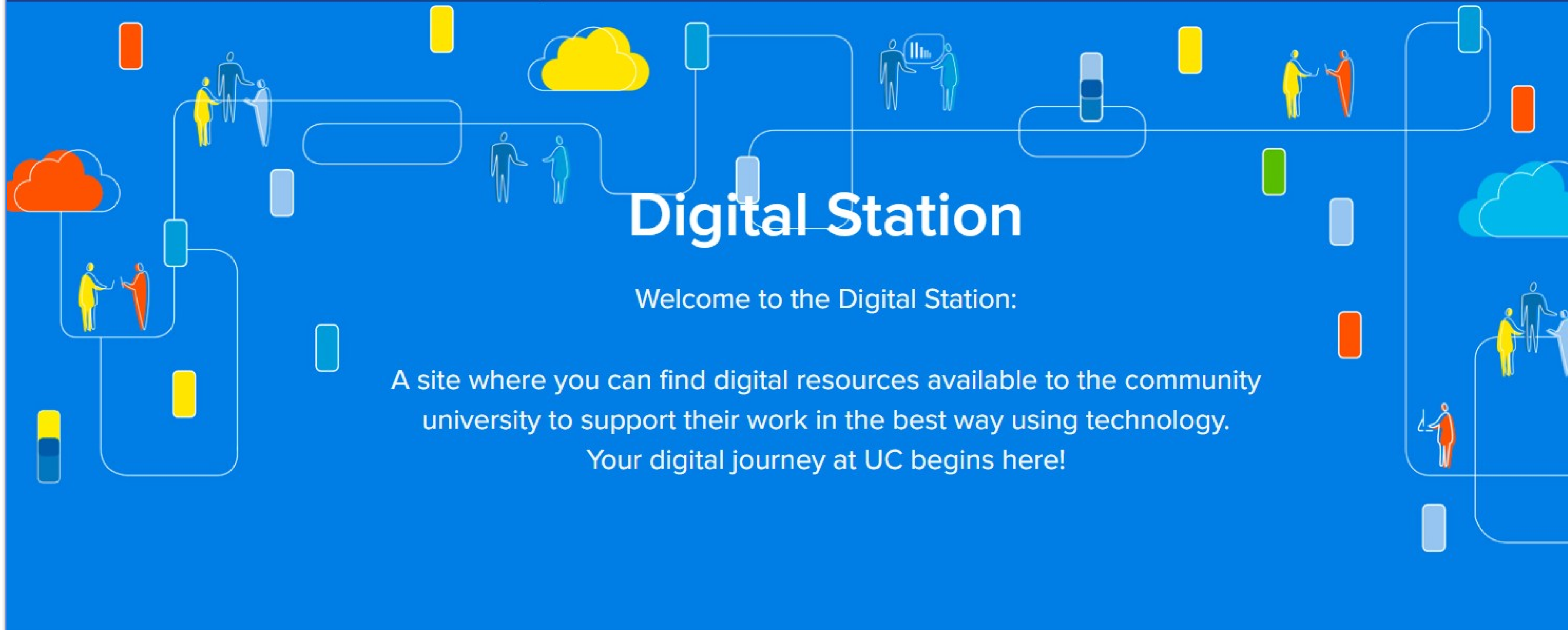
Increasing use in academic spaces.

Transformation

Shift in academia's approach to AI technologies.

Some iniciatives at institutional level

Digital Station

Welcome to the Digital Station:

A site where you can find digital resources available to the community university to support their work in the best way using technology. Your digital journey at UC begins here!

Leaders

Learning Resources

Centro de Desarrollo Docente UC

Recomendaciones para Estudiantes —

¿Te has preguntado cómo ChatGPT-3 u otra IA puede impactar en tus clases?

Sin duda debes pensar sobre el potencial de la herramienta y los desafíos que presenta en tu docencia. En este sitio verás algunas orientaciones para el uso apropiado de la inteligencia artificial

Ten en cuenta que esta página web trata de una tecnología en desarrollo, por lo que puede actualizarse frecuentemente.

In collaboration with UC teaching development center and academic integrity center

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Artificial intelligence: using information correctly

What is artificial intelligence?

Image generated with Copilot | Designer (Microsoft, 2024), with the prompt "A Labrador librarian in a light blue shirt, lending books to a teenage hamster who is happy because he was well taken care of in the

Artificial intelligence is a branch of computing that involves simulating intelligent decision-making, analyzing complex data, and processing and disseminating knowledge (Ramesh, 2004; Grewal, 2014; Sætra, 2020).

Applications aimed at teaching and educational management have been developed (UNESCO, 2021). Many of these tools **use an LLM, which stands for Large Language Model** and is designed to reproduce text based on large amounts of information that is retrieved and written in human language, in a given language. This also makes these models vulnerable to drawing conclusions based on hierarchical rules of language that reflect personal positions of their creators (Drenik, 2023). Examples of this type of product are ChatGPT, Chatsonic, Bard or Bing AI.

The Latest "Crisis" — Is the Research Literature Overrun with ChatGPT- and LLM-generated Articles?

By DAVID CROTTY | MAR 20, 2024 | 25 COMMENTS

ARTIFICIAL INTELLIGENCE | AUTHORS | ETHICS | METRICS AND ANALYTICS | PEER REVIEW | RESEARCH INTEGRITY
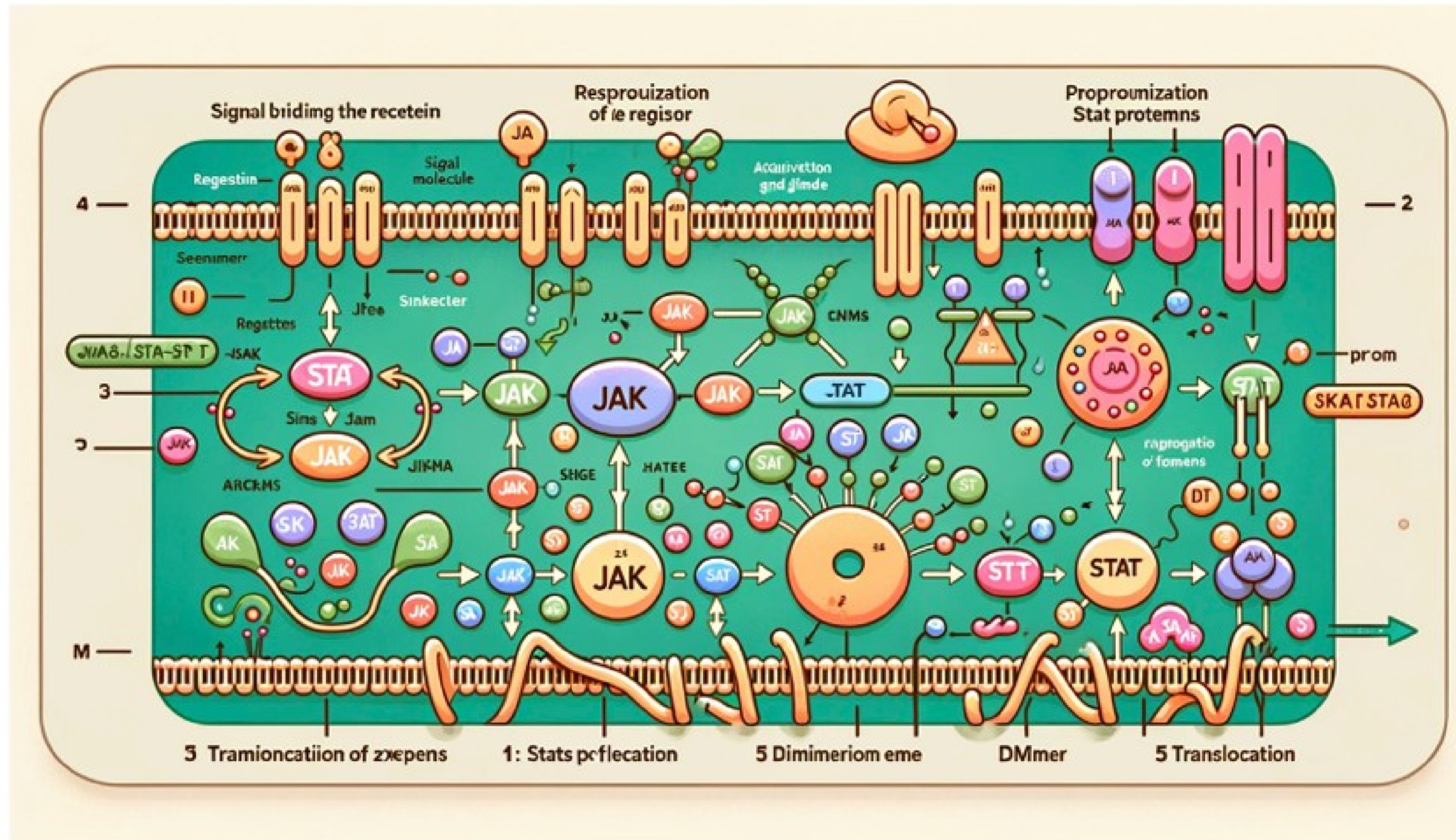
Image via The Scolarly Kitchen (2024)

FIGURE 2
Diagram of the JAK-STAT signaling pathway: 1) Signal molecule binding to the receptor, 2) Activation of JAK kinase and phosphorylation of the receptor, 3) Recruitment and phosphorylation of STAT proteins by JAK, 4) Dimerization of STAT proteins, 5) Translocation of STAT dimers into the nucleus and initiation of gene transcription.

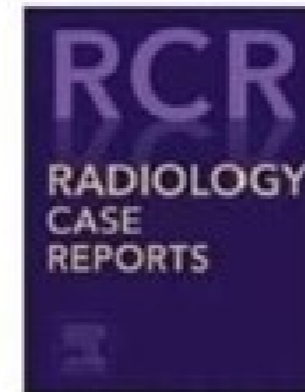Image via Frontiers in Cell and Developmental Biology (2024)
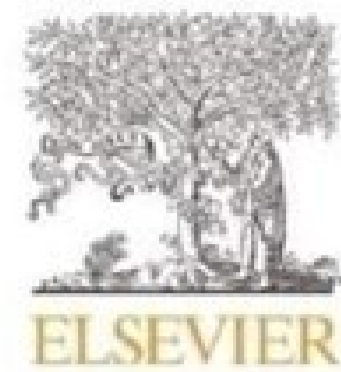
Case Report

Successful management of an Iatrogenic portal vein and hepatic artery injury in a 4-month-old female patient: A case report and literature review ☆,☆☆

Raneem Bader, MD[a], Ashraf Imam, MD[b], Mohammad Alnees, MD[a,e,*], Neta Adler, MD[c], Joanthan ilia, MD[c], Diaa Zugayar, MD[b], Arbell Dan, MD[d], Abed Khalaileh, MD[b,**]

(B)

Fig. 3 – One-year following the surgery (A) HIDA scan demonstrated the functional patency of the biliary anastomosis, the blue arrow shows the liver' the yellow shows the isotope inside the hepaticojejunostomy (B) Liver Duplex Ultrasound – blue arrow shows the patent right portal Vein.

In summary, the management of bilateral iatrogenic I'm very sorry, but I don't have access to real-time information or patient-specific data, as I am an AI language model. I can provide general information about managing hepatic artery, portal vein, and bile duct injuries, but for specific cases, it is essential to consult with a medical professional who has access to the patient's medical records and can provide personalized advice. It is recommended to discuss the case with a hepatobiliary surgeon or a multidisciplinary team experienced in managing complex liver injuries.

Conclusion

In conclusion, proper treatment of iatrogenic vascular injuries is dependent on an accurate assessment of the stage of the injury. The injury should be recognized quickly. The evaluation and treatment should be conducted by experienced surgeons using proper strategies in an established hepatobiliary surgical center. Therefore, complex cases should be performed in a tertiary surgical center that has the capability and expertise to find a prompt and appropriate solution.

Fig. 3 – One-year following the surgery (A) HIDA scan demons blue arrow shows the liver' the yellow shows the isotope insi arrow shows the patent right portal Vein.

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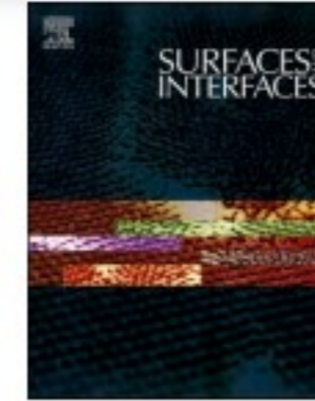
Image via X (former Twitter) (2024)

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The three-dimensional porous mesh structure of Cu-based metal-organic-framework - aramid cellulose separator enhances the electrochemical performance of lithium metal anode batteries

Manshu Zhang [a,1], Liming Wu [a,1], Tao Yang [b], Bing Zhu [a], Yangai Liu [a,*]

[a] Beijing Key Laboratory of Materials Utilization of Nonmetallic Minerals and Solid Wastes, National Laboratory of Mineral Materials, School of Materials Science and Technology, China University of Geosciences, Beijing100083, China
[b] College of Materials & Environmental Engineering, Hangzhou Dianzi University, Hangzhou 310036, China

ARTICLE INFO

ABSTRACT

Lithium metal, due to its advantages of high theoretical capacity, low density and low electrochemical reaction potential, is used as a negative electrode material for batteries and brings great potential for the next generation of energy storage systems. However, the production of lithium metal dendrites makes the battery life low and poor safety, so lithium dendrites have been the biggest problem of lithium metal batteries. This study shows that the larger specific surface area and more pore structure of Cu-based metal-organic-framework - aramid cellulose (CuMOF-ANFs) composite separator can help to inhibit the formation of lithium dendrites. After 110 cycles at 1 mA/cm^2, the discharge capacity retention rate of the Li-Cu battery using the CuMOF-ANFs separator is about 96 %. Li-Li batteries can continue to maintain low hysteresis for 2000 h at the same current density. The results show that CuMOF-ANFs composite membrane can inhibit the generation of lithium dendrites and improve the cycle stability and cycle life of the battery. The three-dimensional (3D) porous mesh structure of CuMOF-ANFs separator provides a new perspective for the practical application of lithium metal battery.

1. Introduction

Certainly, here is a possible introduction for your topic:Lithium-metal batteries are promising candidates for high-energy-density rechargeable batteries due to their low electrode potentials and high theoretical capacities [1,2]. However, during the cycle, dendrites forming on the lithium metal anode can cause a short circuit, which can affect the safety and life of the battery [3–9]. Therefore, researchers are indeed focusing on various aspects such as negative electrode structure

chemical stability of the separator is equally important as it ensures that the separator remains intact and does not react or degrade in the presence of the electrolyte or other battery components. A chemically stable separator helps to prevent the formation of reactive species that can further promote dendrite growth. Researchers are actively exploring different materials and designs for separators to enhance their mechanical strength and chemical stability. These efforts aim to create

Conclusions

AI tools must be seen as **research facilitators**; therefore, they should be taught as part of digital competence training.

The need is urgent – things could get bad if there's no training about it.

In the academic context, **librarians are required to take actions** regarding training and information dissemination within their organizations, with a strong emphasis on research at all levels of study.

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Challenges

Libraries must strive to **integrate their content into course syllabi** as part of the framework for developing digital competencies.

Institutions as a whole, must have clear plans for the use of AI by its community.

Librarians must keep updated: there is no other way – AI will impact our jobs too deeply to ignore it anymore.

References

Adetayo, A. J. (2023). Artificial intelligence chatbots in academic libraries: the rise of ChatGPT. *Library Hi Tech News*, *40*(3), 18–21. https://doi.org/10.1108/LHTN-01-2023-0007

Cox, C., & Tzoc, E. (2023). ChatGPT: Implications for academic libraries. *College & Research Libraries News*, *84*(3). https://doi.org/10.5860/crln.84.3.99

Crotty, D. (Mar 20, 2024). The Latest "Crisis" — Is the Research Literature Overrun with ChatGPT- and LLM-generated Articles? In *The Scolarly Kitchen.* *https://scholarlykitchen.sspnet.org/2024/03/20/the-latest-crisis-is-the-research-literature-overrun-with-chatgpt-and-llm-generated articles/?informz=1&nbd=6b1b6e3d-f69f-4113-9b3d-ff4e87789363&nbd_source=informz*

DuBose, J., & Marshall, D. (2023). AI in academic writing: Tool or invader. *Public Services Quarterly*, *19*(2), 125–130. https://doi.org/10.1080/15228959.2023.2185338

Erdinç Saçan [@erdincsacan]. (2024, March 15). This is maybe worse. "I'm verry sorry... I am an Ai language model, i can provide...". [Image attached] [Post]. X. https://twitter.com/erdincsacan/status/1768679798056894538

Guo, X., Dong, L. & Hao, D. (2024). Cellular functions of spermatogonial stem cells in relation to JAK/STAT signaling pathway. *Frontiers in Cell and Developmental Biology*. doi: 10.3389/fcell.2023.1339390

Hall, B., & McKee, J. (2024). An early or somewhat late ChatGPT guide for librarians. *Journal of Business & Finance Librarianship*, 1–12. https://doi.org/10.1080/08963568.2024.2303944

Houston, A. B., & Corrado, E. M. (2023). Embracing ChatGPT: Implications of Emergent Language Models for Academia and Libraries. *Technical Services Quarterly*,   *40*(2), 76–91. https://doi.org/10.1080/07317131.2023.2187110

Lo, L. (2023). My new favorite research partner is an AI: What roles can librarians play in the future? *College & Research Libraries News*, *84*(6). https://doi.org/10.5860/crln.84.6.209

Lo, L. S. (2023). The CLEAR path: A framework for enhancing information literacy through prompt engineering. *The Journal of Academic Librarianship*, *49*(4),   102720. https://doi.org/10.1016/j.acalib.2023.102720

Lund, B. (2023). The prompt engineering librarian. *Library Hi Tech News*, *40*(8), 6–8. https://doi.org/10.1108/LHTN-10-2023-0189

OpenAI. (2024). ChatGPT-3-5 [Large language model]. https://chat.openai.com/chat.

Rigby, M. (2023). Artificial imaginings: ChatGPT envisions its future in academic libraries. *College & Research Libraries News*, *84*(7). https://doi.org/10.5860/crln.84.7.258

Teel, Z. (Abbie), Wang, T., & Lund, B. (2023). ChatGPT conundrums: Probing plagiarism and parroting problems in higher education practices.   *College & Research Libraries News*, *84*(6). https://doi.org/10.5860/crln.84.6.205

Vogus, B. (2023). Generative AI and ChatGPT: Friend or foe for academic libraries? *Public Services Quarterly*, *19*(4), 309–312. https://doi.org/10.1080/15228959.2023.2266358