



GENERATIVE AI: A CASE STUDY ON CLASSROOM APPLICATIONS

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CASE STUDY:

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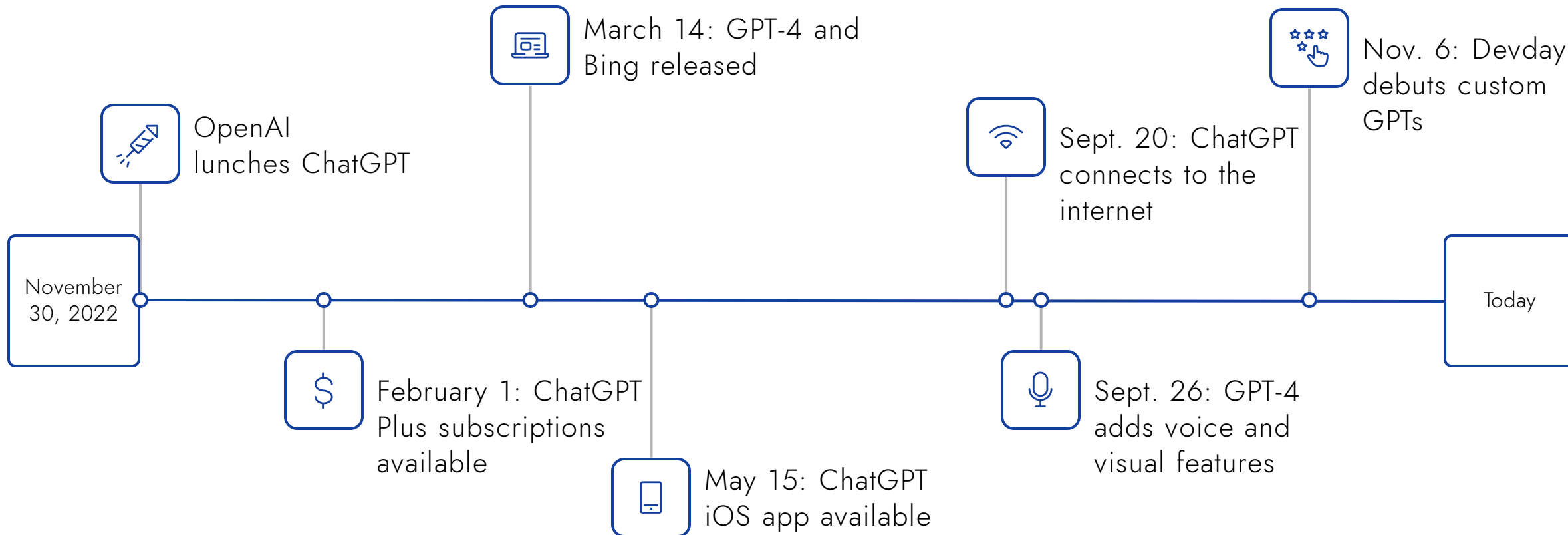
CANADIAN POLITICS AND SOCIETY

Dr. Yannick Veilleux Lepage

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TIMELINE CHAT-GPT



IMPORTANT THINGS TO KEEP IN MIND

ACADEMIC INTEGRITY

- Knowing and following instructions and policies
- Using AI responsibly
- Optimizing the division of labor and integrating GenAI effectively to achieve optimal outcomes

CRITICAL THINKING

- Knowing when to use which tools
- Learning to ask the right questions to get the best possible output
- Assessing output
- Staying informed about the evolving landscape of GenAI

TEACHING AND LEARNING

- Improving key learning outcomes
- Incorporating tools to enhance learning and engagement

HUMAN OVERSIGHT

- Monitoring the use of GenAI tools
- Understanding GenAI's strengths and weaknesses

CYBER SECURITY

- Protecting data privacy and national security
- Understanding risks associated with GenAI tools and AI in general



THE STEPS

OF CREATING A COURSE

1

The syllabus

2

The readings

3

The activities

4

The assignments

5

The assessments

1. THE SYLLABUS

- **Course description and objectives**
- Expectations
- Selected texts
- Explanation/dates of assignments
- **Course schedule**
- Explanation/dates of evaluations
- Policies for late assignments
- Academic regulations



THE SYLLABUS

Prompt Examples

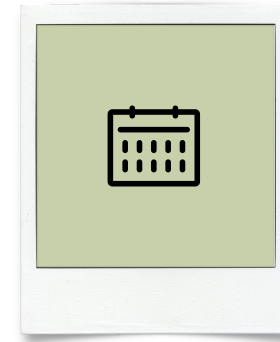


Course Description and Learning Objectives

I'm going to give you two pictures of a textbook I want to use in my class. Use the first four chapters of the Table of Contents to write a "course description and objectives" section for my syllabus.

OR

*I am going to give you the name and Table of Contents of the book I want to use in my 3rd-year Political Science course. Use all this information to write a detailed "course description" section and a "learning objectives" section for my syllabus.



Course Schedule

Using the information I will give you from the textbook's Table of Contents (use chapters in this order 1, 3+7, 8, 5, 4+6, 11+4, 13+15, 12, 16, 17+18, 19, 21+22, 23) write a course schedule starting January 8, 2024, and ending April 5. We meet twice a week, once for 50 minutes + once for 100 minutes. We have a spring break the week of February 19. We need a day of introduction and two days of reviews before the final exam, taking place on April 15. Suggest some short but creative class activities once or twice a week, too, based on the day's lecture. Create a table with columns for week #, class dates, topic(s) of the day, activities of the day, and readings due for that day.

2. READINGS AND OTHER MEDIA

- Textbooks
- **Articles**
- Videos
- **Images**, graphs, data, and more
- Online platforms and tools
- Podcasts
- Books and e-books
- Collaborative tools
- Educational software



READINGS AND OTHER MEDIA

Prompt Examples



Articles

*Could you help me find current and comprehensive reading and listening materials for my course on Canadian Politics and Society? I'm looking for a mix of academic articles, news features, podcasts, and any other relevant resources that provide insights into Canada's political landscape, societal issues, and policy developments in the 21st century. The materials should be suitable for 3rd-year university students and cover a range of perspectives and topics relevant to the course such as federalism and Indigenous governance, judicial activism, municipal powers, electoral systems, accountability in the Canadian Armed Forces, linguistic policies, Canada's colonial legacy, and immigration policies.

(*[Elicit.com](https://www.elicit.com) or [perplexity.ai](https://www.perplexity.ai))



Images

Find visual material for my course on the powers of the Canadian Prime Minister since 2000. These visuals should aid in illustrating, explaining, and analyzing the scope, changes, and impacts of prime ministerial powers during this period. Select materials that reflect key political events, legislative changes, and pivotal moments. Include graphs and charts showing changes in public opinion, legislative activity, or other quantifiable data related to the prime minister's office, as well as historical photographs or illustrations depicting significant events or figures in Canadian politics, and comparative visuals that highlight differences or similarities with other parliamentary systems. Ensure that each selected visual aids in enhancing understanding, promoting analysis, or fostering discussion among students. Consider how these visuals can be integrated into my class lectures, discussions, and assignments. Aim for a diverse representation of perspectives and voices. Verify the credibility, accuracy, and copyright permissions of all sources. ([Bing/Copilot](https://www.bing.com/copilot))

3. IN-CLASS ACTIVITIES

- **Lecture**
- Presentations
- Hands-on lab
- **Revisions (before exams, quizzes)**
- "Insta-research"
- Discussions
- Role playing
- Peer teaching
- Case study analysis
- Brainstorming
- **Practice**
- Group project



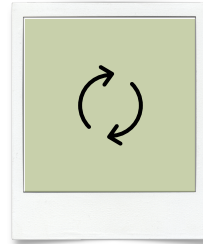
IN-CLASS ACTIVITIES

Prompt Examples



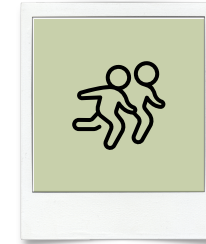
Lectures

*Write a 30-minute very detailed lecture plan (with real-life examples and external references to support these examples) based on Canada's immigration policy in the 20th century, and more specifically on Post-WWII policy changes. Include the reasons behind these policies and their effects on Canada and other countries, using the textbook by Rand Dyck and Christopher Cochrane, *Canadian Politics: Critical Approaches*, (7th ed.) and other newspapers and academic articles, as well as government documents, for a 3rd-year Political Science course in a military university.



Revisions

Teach me about Canada's colonial legacy in Canada and other countries, using the textbook by Rand Dyck and Christopher Cochrane, *Canadian Politics: Critical Approaches*, (7th ed.) as a reference and lots of real-life examples to illustrate the main points. -> Now give me more information about ongoing effort to address historical injustices with external sources of info. ([Bing](#)/Copilot to find articles, [TDLR This](#) for summaries)

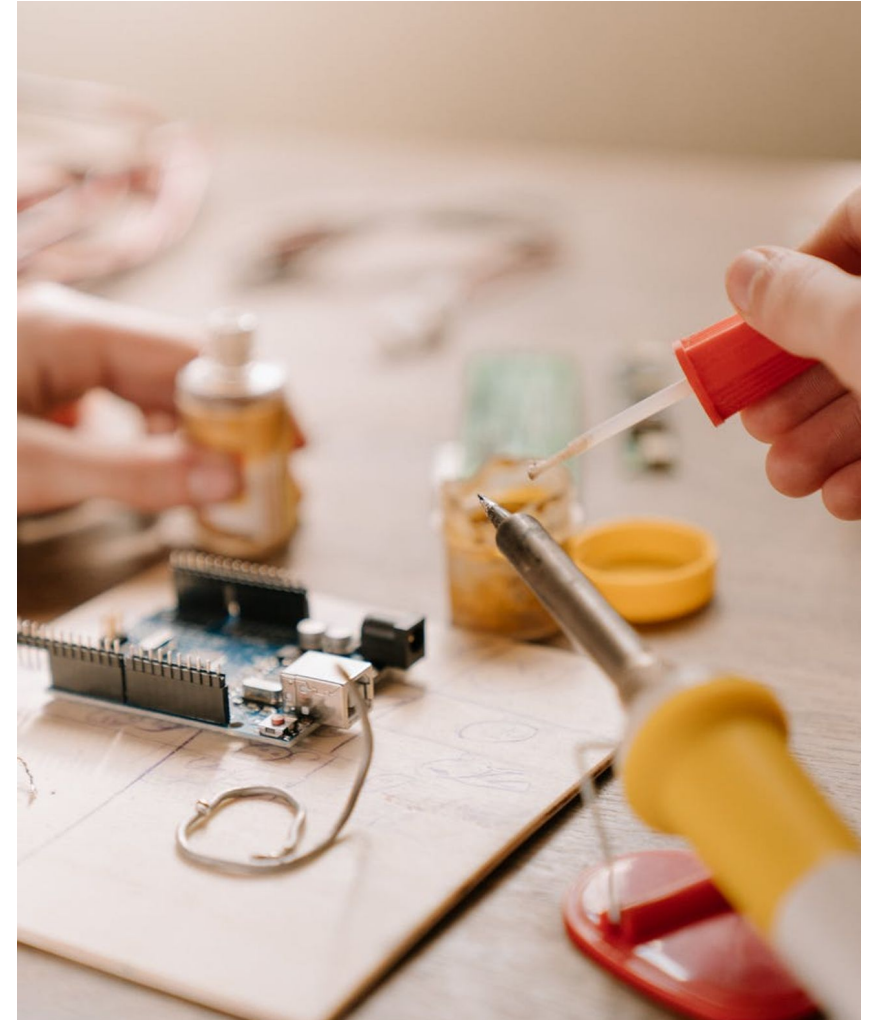


Practice/Discussions

*Create a set of questions about Canada's Political parties for our class, so that we can make sure we understand how they work, their purpose, how they changed overtime, their strengths and weaknesses, their influence on immigration and education and healthcare, the public's perception, media coverage, their history in the last 200 years, etc. Wait for us to answer one question before you tell us if we were right or not. If not, give us a hint. Don't give us the next questions until we have found the right answers.

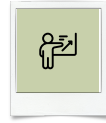
4. ASSIGNMENTS

- Design/artistic/practical project
- **Presentation**
- Portfolio
- Lab report
- Problem set/case study
- **Poster and infographics**
- Reflective journal
- Simulation and modelling



ASSIGNMENTS

Prompt Examples



Presentations

*Create slides for a 20-minute presentation that explores and analyzes the evolution of municipal powers in Ontario in the 21st century, the factors influencing these changes, and their impact on local governance and communities. Examine case studies of how specific municipalities in Ontario have responded to or been affected by these changes. case studies of how specific municipalities in Ontario have responded to or been affected by these changes. Analyze the balance of power between provincial and municipal governments and how this has evolved. Provide a brief historical overview to set the context. Discuss major laws or policies introduced and their significance. Include examples of municipal initiatives or challenges that illustrate the practical application of these powers. Conclude with your analysis of the current state of municipal powers in Ontario and future outlook. Give me tips to make the presentation engaging, as well as answers to potential questions.

(*[Gamma.app](#)) (Copilot on PowerPoint, see [Mollick's demo](#))

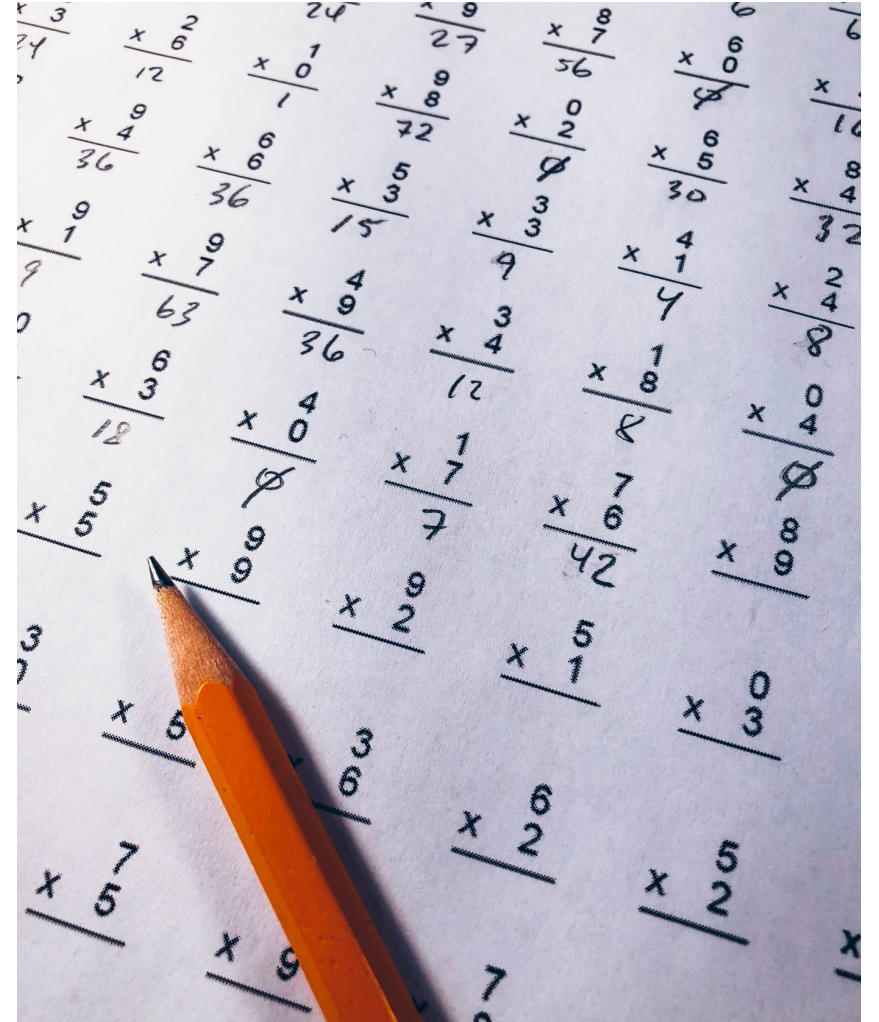


Posters

Create a conference poster that is informative and visually engaging, that explores the theme of accountability within the Canadian Armed Forces (CAF) since the turn of the 21st century and examines how accountability measures have evolved, been implemented, and impacted the CAF. Use headings and subheadings. Include key data, quotes, or statistics where relevant. Use a visually appealing layout that enhances readability and engagement. Use charts, graphs, or images to illustrate key points and data effectively. Maintain an academic tone. Cite sources and provide a reference section. Use credible academic and military sources, government reports, and reputable news articles. Clearly define "accountability" in the context of the CAF. Investigate events, reforms, or scandals related to accountability. Analyze changes in policies, procedures, or leadership approaches aimed at enhancing accountability. Discuss the role of external bodies or public opinion in shaping accountability measures within the CAF. ([TDLR This](#) for summaries)

5. ASSESSMENTS

- Essay/research paper
- Presentation
- **Case study analysis**
- Performance
- Group project
- Hands-on lab
- **Typical (multiple-choice, fill-in-the-blank, short answer) exam**
- Rubrics (special note on that at the end)



ASSESSMENTS

Prompt Examples



Case Studies

Create a case study assignment for my 3rd-year Political Science course on Canadian Politics and Society. The focus is on the "Express Entry" system and Canada's 21st-century immigration policy. Include this news article for students to analyze and reflect on. The assignment should direct students to assess the system's social and economic impacts on Canadian society and the labor market. Students must write a 1000-word report, combining their analysis with course concepts, to critically reflect on and evaluate the policy's effectiveness and suggest potential future modifications or directions.



Multiple-choice Exams

*Create a multiple-choice exam (with 20 questions) to evaluate students' knowledge of key policy changes, their reasons, and their implications, from the year 2000 to the present. Include questions on significant legislative changes, policy reforms, and their socio-economic impacts. Address various immigration programs and initiatives introduced in Canada, such as the Express Entry system, Provincial Nominee Programs, and changes in refugee and asylum policies. Examine Canada's response to global events affecting immigration, such as international conflicts, humanitarian crises, and global pandemics. Create clear, concise questions with a single correct answer and three plausible distractors. Ensure that the questions cover a range of difficulty levels, from basic factual recall to more complex analysis. Base questions on a variety of sources, including historical texts, current policy documents, statistical data, and relevant scholarly analysis. Ensure that the correct answers are factually accurate and supported by current academic understanding and data. Give me your reasons behind each correct answer.

TEACH YOUR STUDENTS HOW TO USE GENAI...



... ethically and effectively

<https://www.canada.ca/en/government/>



... as personal tutors and coaches

<https://hbsp.harvard.edu/inspiring-minds/student-use-cases-for-ai>



... as feedback generator

<https://hbsp.harvard.edu/inspiring-minds/ai-as-feedback-generator>

FOR EXAMPLE

To teach students how they can use GenAI in a respectful, ethical, and effective manner, here is the example of a prompt you could study together to get them started on a paper:

**I need to write a critical essay (2000 words) for my 3rd-year Political Science course on Judicial Activism in Canada. The paper can't be about something that is currently in process in Canada and can't be speculative. Can you help me brainstorm for this paper? Don't give me an outline, but ask me questions (one at a time, like a tutor guiding me, one step at a time) that will help me ensure I understand the concept, narrow down the topic, find academic resources, analyse the topic critically, organize my ideas logically, and write an outline and thesis statement. Once I have written a thesis statement and an outline, tell me if I have forgotten anything important. Once I have written the entire paper (on my own), tell me if I made some typos, grammar mistakes, punctuation errors, or formatting (APA) errors, but don't rewrite the essay for me.*





OTHER EXAMPLES

***To teach students how to use the right tools at the right time**, here is a nice tool to show them how to brainstorm for ideas and avoid writer's block:

(*[Audiopen.ai](https://audiopen.ai))

To teach students to write good prompts, practice together and evaluate the specificity, scope, depth, structure, purpose, and relevance of different prompts.

For example: *"Create a comprehensive overview presentation (10 slides) of key developments in Indigenous rights in Canada during the 21st century, highlighting significant legal cases, legislative changes, and socio-political movements. Include a timeline of events, profiles of notable Indigenous leaders, and an analysis of the impact of these developments on Indigenous communities and Canadian society. Emphasize current challenges and ongoing debates regarding land rights, self-governance, and cultural preservation."*

vs.

"Tell me about Indigenous rights in Canada in the 21st Century so I can create a presentation for my class."

THE RUBRIC... AS A FINAL WORD

1. When in doubt, play with it

- What are some common and more unusual sections that could I have on a rubric that I want to use to grade a class presentation on Indigenous governance in the 21st century in Canada? Ask me questions to narrow down the topic and assignment, one step at a time.
- I am a university prof, and I want to be super creative this semester. I am not sure how to use Generative AI in my course with assignments, activities, and assessments. What suggestions do you have for me?
- Don't grade students' assignments with it, though!

2. Try something new every day

- Try using it in your own research (e.g., when you write an article) and test it, push it to its limit, be creative, and don't give up if you get a disappointing answer or result.
- Don't ask smart "human questions." Ask smart "machine questions."
- If you are overwhelmed or a bit scared, remember that burying your head in the sand won't help (except if you plan on retiring this year)!
- Again, don't grade students' assignments with it! It's not safe, and it's not pedagogically sound.

QUESTIONS?

COMMENTS?

COMPLAINTS?



REFERENCES AND RESOURCES

Articles and documents

- Centaurs and Cyborgs on the Jagged Frontier
- How Generative AI Tools Help Transform Academic Research
- Assessment redesign for generative AI: A taxonomy of options and their viability
- Guide on the Use of Generative AI (Canada)

Other readings

- GenAI and Intellectual Property Rights
- ChatGPT and the Rise of Generative AI: A Threat to Academic Integrity?
- Testing of Detection Tools for AI-Generated Text
- Human by Design

Documentaries and videos

- Top 10 documentaries on GenAI
- Unknown: Killer Robots
- Initiation au vocabulaire de l'intelligence artificielle

Tools

- AudioPen
- Wisdolia
- Kortext
- Beautiful
- Gamma
- Perplexity

More tools

- Elicit
- Research Rabbit
- Scite
- LectureTranslator
- Sudowrite
- TDLR This

