

DMML Ethics Essay

This assignment is intended to help you learn about recent issues in data mining and machine learning, particularly some of the ethical challenges raised by new technological advances. For your assigned topic (e.g., biased data, surveillance, profiling, etc.), you will research it and write an essay.

For this assignment, you will work individually, but you are **required** to use chatGPT *somehow* in the process of writing your essay. (If you don't have an account yet, sign up at <https://chat.openai.com/>). You may ask chatGPT to provide background information, create an outline, and even write text for your first draft. You must also find at least 4 references; chatGPT will likely not be very helpful here. (Although it is often able to hallucinate fake references, we're looking for real references.) Your final essay should be accurate, polished, not sound like generic chatGPT content, and incorporate material from your references (including citations) while avoiding plagiarism.

Your topic has been assigned separately. [The list of all topics is at the end of this document.](#)

Your essay should:

- Be a Google Doc, shared so that **anyone** with the link can **view**. (Note that we will share essays to allow classmates to read and offer feedback on your work.)
- Be 3 pages.
- Be well researched, structured, and written.
- Be accurate. (Watch out for chatGPT hallucinations.)
- Include material from at least 4 references with citations. References should be listed at the end of the essay. You are welcome to use whatever citation style you prefer.
- Focus on your assigned topic.
- Address these questions:
 - What is the topic?
 - Why is it important?
 - What are some real-life examples?
 - Who is impacted?
 - What role does DMML play in this topic?
 - What are the main ethics issues?
 - What is your recommendation for how society should think about the topic moving forward?
 - How was chatGPT used in the creation of the essay?

Evaluation

Your essay will be evaluated based on whether it meets the requirements above. You will help evaluate two of your classmates' essays and provide feedback and two of your classmates will help evaluate your essay. This peer feedback will help determine whether your essay completely, nearly, or somewhat meets the requirements. You will have an opportunity to use one of your redo tokens to resubmit your essay if it does not completely meet the requirements.

Submission

Turn in a link to your essay by the due date in Moodle. Make sure to update sharing settings so anyone can view, then copy the link, and paste it into the provided textbox for the Moodle assignment.

Topics

- Exploitation of intellectual property (e.g., in LLMs or image generation)
- AI and job displacement
- Bias (in data, machine learning, AI systems)
- Explainability and transparency (in machine learning models)
- Privacy
- Policing (using AI tools)
- Rising socio-economic inequality (due to AI)
- Safety and accountability of AI systems (e.g., self-driving cars)
- AI vulnerability to hacking/cyber attacks
- Environmental impact of AI
- AI-powered addiction (of apps, games, etc.)
- Targeted advertising (based on algorithms)
- Surveillance (of online activity using AI tools)
- Deepfakes

Peer Review: DMML Ethics Essay

This assignment is intended to help you learn about recent issues in data mining and machine learning, particularly some of the ethical challenges raised by new technological advances.

You will review three of your classmates' DMML ethics essays with the goals of:

- Learning more about DMML ethics topics.
- Providing feedback that will help your classmates with the next homework assignment, which will be a class presentation on their topic.

Links to your three assigned essays have been provided separately. For each essay, your process is:

- Read the essay.
- Provide your feedback by filling out the peer feedback form (link provided separately) once for each essay.
- Your feedback will come to me, and I will pass on comments to the authors.

Feedback

The feedback form will ask you to evaluate each essay as follows:

- What is your immediate emotional reaction to the essay?
- What is a key idea you learned?
- What parts of the essay were especially effective?
- Which elements of the essay were confusing, needed more detail, etc.?
- Rate the essay (1 - 5) on how well it answers the required questions:
 - What is the topic?
 - Why is it important?
 - What are some real-life examples?
 - Who is impacted?
 - What role does DMML play in this topic?
 - What are the main ethics issues?
 - What is your recommendation for how society should think about the topic moving forward?
 - How was chatGPT used in the creation of the essay?

Evaluation

Your essay reviews will be evaluated based on whether they represent a solid effort in providing feedback as described above. You will have an opportunity to use one of your redo tokens to resubmit an essay review if it does not completely meet the requirements.

Submission

Fill out the review form three times, once for each of the essays assigned to you.

DMML Ethics Presentation

This assignment is intended to help you learn about recent issues in data mining and machine learning, particularly some of the ethical challenges raised by new technological advances. You have previously written an essay on an assigned topic (e.g., biased data, surveillance, profiling, etc.). Now, you will turn your work into a class presentation.

For this assignment, you have been paired with a partner who has written an essay on the same topic as you. Together you will create a class presentation. This will require additional research to find visuals for your slides and to flesh out any holes in your work thus far. Your final presentation should be accurate, polished, include lots of images and not too much text, and incorporate material from your references while avoiding plagiarism.

Your assigned topic, partner, and presentation date have been provided separately. The list of all topics is provided at the end of this document.

Your presentation should:

- Be in Google slides, shared so that **anyone** with the link can **view**.
- Be designed to take 5-8 minutes.
- Be well-structured, designed, and practiced so that it is engaging and informative.
- Include a references slide at the end listing all the references (at least 4).
- Be accurate.
- Focus on your assigned topic.
- Address these questions:
 - What is the topic?
 - Why is it important?
 - What are some real-life examples?
 - Who is impacted?
 - What role does DMML play in this topic?
 - What are the main ethics issues?
 - What is your recommendation for how society should think about the topic moving forward?

Evaluation

Your presentation will be evaluated based on whether it meets the requirements above. You will help evaluate your classmates' presentations and provide feedback and your classmates will help evaluate your presentation. This peer feedback will help determine whether your presentation completely, nearly, or somewhat meets the requirements. If your presentation does not completely meet the requirements, you will have an opportunity to use one of your redo

tokens and research a new topic as an essay following the guidelines from the ethics essay assignment.

Submission

Turn in a link to your slides in Moodle before class time on the day of your presentation. Make sure to update sharing settings so anyone can view (please do not share directly with me), then copy the link, and paste it into the provided textbox for the Moodle assignment.

Topics

- Exploitation of intellectual property (e.g., in LLMs or image generation)
- AI and job displacement
- Bias (in data, machine learning, AI systems)
- Explainability and transparency (in machine learning models)
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