CSCI 300, Fall 2024
Essay 2

Topics Overview: Open-Source Software, Privacy, and Technological Influences on Society

Directions:
- Pick **one** of the case studies presented below and write a brief essay (minimum 1 page, maximum 2 pages) stating your positions on the ethical and legal implications of the case. Be sure to stress **both** ethical and legal issues.
- Ask ChatGPT, or any other LLM, to give counterarguments to the ethical and legal issues you identify in the case.
- Paste the generated counterarguments and all prompts you provided into your essay. Be sure to **bold** or *italicize* the AI output so I can distinguish it from the body of your essay. Evaluate the responses, stating if you agree or disagree and explain why.
- Provide at least 3 cited sources, one of which may be the textbook.

Grading: See the grading rubric provided with the essay assignment in Blackboard.

CASE 1: Unauthorized Use of Open-Source Code
Taylor is an open-source developer who has built a popular image-processing library called "Visionary," known for its high-performance image filtering and enhancement algorithms. Taylor released Visionary under the MIT License to encourage other developers and companies to use, modify, and even distribute the library, provided they meet the license's requirements—specifically, the original author is credited and a copy of the license is included in the distributions.

A few months after Visionary gains traction, Taylor discovers a startup, PixelBoost, offering a commercial image-editing application that claims to feature "proprietary, state-of-the-art" image-processing technology. Curious, Taylor decides to test PixelBoost's software, only to find its algorithms behave identically to Visionary's in both performance and structure.

Digging deeper, Taylor compares the disassembled code from PixelBoost with Visionary's code and confirms that PixelBoost has incorporated significant portions of Visionary directly into their application. However, PixelBoost has rebranded the technology under their own trademark and does not mention Visionary, nor does it include the required MIT License in its distribution. To the public, PixelBoost represents this technology as entirely original, with no credit given to Taylor or Visionary.

Taylor is faced with several ethical and legal decisions. They could contact PixelBoost to demand proper attribution and license inclusion, take legal action, or reach out to the open-source community to publicly address the violation. However, Taylor also worries about the resources needed to pursue such a case against a well-funded startup and whether this dispute could ultimately harm Visionary's reputation.

Questions for Consideration:
1. What the major ethical issues in this case?
2. Is PixelBoost's use of the code a violation of the license, or are they exercising their right to create proprietary software?
3. Compare the MIT License to the MIT No Attribution license. What would be the legal ramifications if Taylor licensed the code under the MIT No Attribution license?
4. What are the potential consequences (for both Taylor and PixelBoost) if Taylor pursues legal action?
5. How can the computer science community promote ethical behavior and cooperation in the development and use of open-source software?

CASE 2: Privacy and Social Media

Lily, a data scientist working for a popular social media platform, Grapevine, is part of a team tasked with improving user engagement. To do this, her team develops an algorithm that tracks users' browsing habits, online purchases, and geographic locations to generate "Personal Interests Scores." This score helps Grapevine suggest more targeted ads and content tailored to users' interests.

While the data used is technically anonymized, Lily knows that the combination of geographic data, purchase patterns, and browsing history could easily be de-anonymized, effectively revealing the identities of individual users. Lily's concerns grow when she learns that Grapevine is selling the "Personal Interests Scores" to third-party companies, including political organizations, which want to target specific demographic groups with highly customized messages.

Lily debates bringing her concerns to her supervisor, but she realizes that her company complies with all current privacy regulations and has users agree to a lengthy terms-of-service agreement. She also fears that raising these concerns might put her position at risk. Nonetheless, she feels uneasy about the potential for misuse of the data—especially the possibility of user targeting based on sensitive or potentially invasive personal data.

Lily must now decide whether to push for better data protection practices internally, warn the public, or seek some form of oversight to ensure user data isn't exploited. Yet, she knows that taking any of these actions could have personal and professional consequences.

Questions for Consideration:
1. What are the major ethical issues in this case?
2. What ethical obligations, if any, does Grapevine have to ensure users fully understand how their data will be used? What is informed consent?
3. Considering the third-party use of Grapevine's data, particularly by political organizations, is there an ethical difference between using data for targeted advertising and using it for political messaging? What risks might arise from this type of data use, and how should companies address them?

4. Assume the worst case happens: a third-party that purchased scores manages to de-anonymize them, tying scores to specific users. The third-party then publishes specifics about certain users (gender, religious affiliation, home address, etc.) to fester targeted animosity. What are the legal implications for Grapevine, if any?
5. Should companies like Grapevine prioritize user privacy over potential revenue gained from selling data-driven insights? Should there be legal limits to how user data can be monetized.

CASE 3: Intellectual Property and AI Training
Evelyn is an artist known for her distinctive digital illustrations, which are widely shared online and have gained her a considerable following. She licenses her artwork under strict terms, allowing for personal use and sharing, but forbidding any commercial use without her permission.

Unbeknownst to Evelyn, a tech startup, Artify, has been scraping publicly available artwork from the internet to train a new AI model designed to generate "original" digital art based on user input. Artify's AI model learns patterns, styles, and techniques from these online sources, which include Evelyn's artwork, among many others. The model now produces images that sometimes closely resemble her work, capturing the unique style and nuances she developed over years of practice.

When Evelyn learns that Artify's AI is producing art similar to her own, she feels her creative work has been unfairly exploited, especially since the AI model is now being sold as a subscription service. Although her art was publicly available online, she never agreed to have it used in this way. Evelyn reaches out to Artify, but they respond by explaining that their data collection methods were legal and that the model itself does not store her images—it only learns from them.

Evelyn is torn about how to proceed. While she wants to protect her artistic integrity and stop what she sees as misuse of her work, Artify's actions technically fall within the legal gray area around AI training data. Evelyn considers seeking legal advice, publicly voicing her concerns, or even lobbying for stronger protections around digital artwork and AI training.

Questions for Consideration:
1. Should artists like Evelyn have the right to restrict the use of their publicly shared art in AI training, even if the content is publicly available? Discuss how intellectual property laws could or should adapt to address the unique challenges posed by AI training models.
2. If an AI model generates artwork closely resembling Evelyn's style, to what extent can that new artwork be considered "original"? Explore the ethical implications of using AI to replicate an artist's unique style and consider whether an artist's style can—or should—be protected.
3. Should AI companies be required to inform and seek consent from content creators when using their work as training data?

4. Discuss whether protections should be put in place to prevent AI from undermining human creators and their contributions.
5. In a rapidly advancing field like AI, where laws often lag behind technology, who is responsible for setting ethical guidelines around training data?