

Fair Learning

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About this paper

- Intersection of copyright and machine learning
- Fair use and the concept of "**Fair Learning**"
- Using copyrighted data to train AI should be considered fair use
- Provides a framework for balancing copyright with AI

Creating data for training

- ML systems are data-hungry
- Creating dataset requires millions of images, videos, audio, or text-based works
- Most works are almost all copyrighted (text, music, etc.)
- Developers rely on 'Fair Use' precedents

Fair Use

- Exception in copyright law that allows limited use of copyrighted works
- Examples:
 - Sega vs Accolade
 - Google Books
- Training dataset also aims to learn non-expressive elements of works
- But, existing precedents do not perfectly apply to the context of AI training
- Enter Fair Learning

Fair Learning

- Framework to evaluate AI's use of copyrighted data
- AI's purpose is the key
- Aiming to learn unprotectable elements (facts, ideas, functions) should be fair

Examples of Fair Learning

- Self-driving cars learning to recognize stop signs
 - Needs to be trained on traffic signs
 - ML system wants photos of stop signs to learn to recognize stop signs
 - Not interested in artistic choices of each photos (lighting, composition, etc.)
 - Difference between a stop sign at night in the rain vs not
 - Only interested in functional aspect of the image

Examples of Fair Learning

- Learning to translate languages
 - Text generation and translation software similarly need to train on a corpus of written works
 - Interested in mechanics of language, not specific creative expression
 - Models is focused on language structure and usage patterns
 - No intention in copying or exploiting specific creative expressions
- Identifying medical conditions from images
 - Using images to learn the functional characteristics of medical conditions
 - Not interested in aesthetic or expressive qualities of the images

Benefits of Fair Learning

- Better, safer, fairer AI – access to broader datasets
- Prevents data monopolies
- Can address bias in AI with diverse datasets
- Allows access to facts and ideas

How it should be implemented

- Integrate into existing “fair use” under U.S. copyright law
- Prioritize purpose – whether AI’s purpose is “fair learning”
- AI’s output also matters and it should be considered
- Developers should demonstrate that their use aligns with fair learning
- Should provide guidance for courts and be transparent

Downsides

- Potential for overly permissive use and vague boundaries
- Difficulty in distinguishing fair learning from exploitation
- Potential abuse
- Needs case-by-case analysis
- AI's purpose and intention is important

Summary

- ML systems need massive amounts of data to train
- Fair learning can help ensure copyright law doesn't holdback innovation while respecting the core values of copyright
- Balance between copyright protection and AI innovation
- Promotes development of better, fairer, safer AI

Thoughts

- 👍 Balanced approach to copyrights in training models
- 👍 Detailed reasons why fair learning is needed
- 👍 Guideline on how it should be implemented
- 👎 Argument for fair learning could have been strengthened by addressing the concerns and insights of content creators