AI Models & Copyright Battles

An interview with Professor Shyamkrishna Balganesh

I) How the Models Work

Local Copying – Essential Functionally, Even if Not Technically
Machine learning models, particularly large language models (LLMs) and diffusion models, rely on vast amounts of data to function. This process begins with “ingestion,” where the model is trained by absorbing patterns from datasets—often comprised of copyrighted works and public domain material. To process this data efficiently, these models often make local copies of the datasets to store them on local servers, although this is not always technically required. This step, however, is crucial in reducing the time needed for tokenization and data processing.

How LLMs and Diffusion Models Work and Ingest Data
LLMs are predictive models that generate text by analyzing patterns in the data they ingest, predicting the most likely next word, phrase, or sentence based on the training material. Diffusion models, on the other hand, are commonly used in image generation, where they “denoise” data to create images that approximate the patterns of the dataset. Both systems depend on the vast amount of data provided during training, with their effectiveness and intelligence directly tied to the diversity and quantity of their input.

II) Fair Use Doctrine

What Is It?
Fair use is a legal doctrine under U.S. copyright law that permits limited use of copyrighted material without requiring permission from the rights holders. It aims to balance the rights of content creators with the broader public interest in promoting creativity, learning, and innovation.

What Are the Factors?
The determination of fair use is based on four key factors:

1. The purpose and character of the use, including whether such use is of a commercial nature or for nonprofit educational purposes.
2. The nature of the copyrighted work.
3. The amount and substantiality of the portion used in relation to the copyrighted work as a whole.
4. The effect of the use on the potential market for or value of the copyrighted work.

What Does "Transformative" Mean in Terms of Fair Use?
A key component of the first factor, "transformative use," refers to whether the new work adds something new, with a further purpose or different character, altering the original with new

expression, meaning, or message. Courts have often favored fair use when a work is transformative, as it suggests the new work is not merely a substitute for the original.

Key Fair Use Cases

- **Authors Guild v. Google (2015):** This case involved Google's project to digitize millions of books for its search engine, which was ultimately ruled as fair use. The court emphasized that Google's use was transformative and did not affect the market for the original works.
- **Warhol v. Goldsmith (2023):** In this case, the Supreme Court ruled that Andy Warhol's silkscreen image of Prince, derived from a photograph by Lynn Goldsmith, was not fair use. This decision clarified the boundaries of transformative use, particularly in visual art.

Fair Use Argument for AI Models
In the context of AI, the fair use defense argues that using copyrighted material for training an AI model is transformative because the AI is not replicating or distributing the original works but rather using them to develop a predictive model. Critics, however, contend that the scale at which these models operate and their ability to reproduce similar outputs could breach fair use boundaries, especially when the AI-generated content directly competes with the original material.

III) AI Copyright Caselaw

NYT v. OpenAI
The New York Times is reportedly in discussions with OpenAI, possibly moving towards litigation, over the use of its articles to train OpenAI's LLMs without permission. The Times argues that this use of copyrighted articles for model training violates copyright laws by creating derivative works that could impact the market for journalism.

WMG v. Suno AI
In this case, Warner Music Group (WMG) sued Suno AI, alleging that the AI company used copyrighted music without authorization to train its models. WMG claims that Suno AI's training practices infringe on the rights of songwriters and artists, as the AI-generated music could replicate or imitate copyrighted works.

Getty Images v. Stability AI
Getty Images filed a lawsuit against Stability AI, the creator of Stable Diffusion, for allegedly using millions of its copyrighted images without permission to train its model. Getty argues that Stability AI's actions constitute copyright infringement because the model generates images that may closely resemble the original works, potentially undermining the market for professional images.

IV) The Future and Licensing as a Model for Training LLMs

As legal battles continue to unfold, the future of AI training may move toward a more formalized licensing regime. Professor Balganesh predicts that, rather than relying solely on fair use defenses, AI developers may need to secure licenses from copyright holders to use their works for training purposes. This shift could lead to clearer guidelines for model training, ensuring that creators are compensated for the use of their material while allowing AI models to evolve and innovate within a regulated framework.