UNIVERSITY OF WINDSOR

COMPUTER SCIENCE SOCIETY

MONTHLY NEWSLETTER

SEPTEMBER 2023

WHAT'S INSIDE

NEWSLETTER INTRO

BY TANZIM HOSSAIN

Hey everyone! I'm Tanzim, your Head of Communications this year, and I'm thrilled to kick off our first newsletter of the 2023-2024 school year!

This year, we want to hear from you: Share your recent accomplishments, projects, or anything else worth highlighting for a chance to be featured on next month's newsletter! Even better, email us an article about anything you want, and you'll receive a $15 gift card if your article gets featured.

We have an event-filled year ahead of us, starting with an online GeoGuessr tournament on Saturday, September 16th at 6pm. Make sure to join our Discord server for more info and to participate.

Here's to a fantastic year!

FOR FIRST YEAR STUDENTS: HOW TO GET AHEAD AMONG YOUR PEERS

BY HARSHDIP DEOGAN

Who Am I?
I'm Harshdip, I graduated in 2021 with a Bachelors in Computer Science. I've been part of the CSS as a career advisor, have had 2 internships, and had my first full time job before I graduated. I'm writing this post as advice you can take from someone who didn't know any coding before joining the university!

University, courses, networking, learning programming languages itself can be very overwhelming. Don't let it get to you. Look and listen everywhere, but focus on a set number of things. You'll hear new opinions about professors, languages and frameworks, windows or linux, IDEs, etc everyday. If you don't learn to cut this noise, you'll often find yourself learning everything and nothing.

Here are three things you can do to start getting ahead now:

1. Find a Mentor
The first thing you should do is find a mentor. Meet people, attend CSS events, talk to seniors, and see who you find easy to talk to. Having a friend as a mentor helps with cutting this noise and making a better path in your journey.

2. Choose Frontend vs Backend
Decide what you are most interested in. Do you like frontend or backend?
Frontend: Get started with HTML, then move on to CSS, then JavaScript.
Backend: Learn C from the classes, and learn Python by yourself.
Do not start learning frameworks or take shortcuts with peer pressure. If your foundation is not strong, it will get to you one day. Don't use GPT for answers, don't use Github copilot for code completion. **You need to learn to follow the rules before you can break them.**

3. Attend a Hackathon
Attend your first hackathon THIS FALL! Don't think "I don't know any coding yet, let me learn first". NO - attend a hackathon, meet new teams from different universities, make something. When I went to my first hackathon at Western University in first semester, I only knew HTML and CSS. My team ended up winning Nintendo Switches as a prize :)

Your mentor will help you with defining a more refined path. Everyone's journey is different, remember to cut the noise and not get influenced by every opinion on the server. Feel free to ask any questions! :)

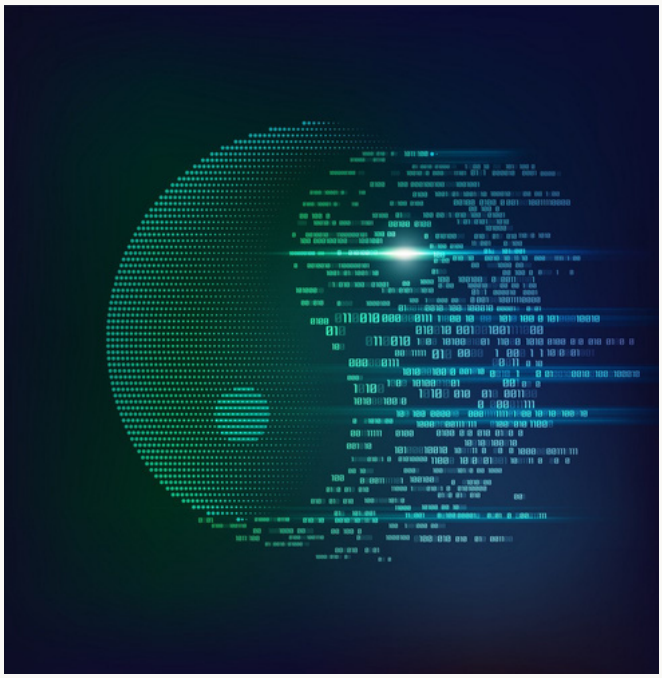
NAVIGATING THE WORLD OF GENERATIVE MODELS: THE GOOD AND THE BAD

BY AKSHAT SHARMA

Generative models have recently swept the artificial intelligence community by storm, attracting academics, programmers, and enthusiasts alike. These incredible technologies are capable of producing text, images, music, and more, frequently with astounding realism. However, generative models have advantages and disadvantages, much like any ground-breaking technology. We will examine the advantages and disadvantages of generative models in this newsletter article, highlighting both their potential advantages and difficulties.

The Good

Generative models, especially variants like the GPT (Generative Pre-trained Transformers) series, Dall-E, Stable diffusion, GANs (Generative Adversarial Networks), and Encoder-Decoder based models have demonstrated unparalleled creative potential. They can produce creative material in a variety of genres, including writing gripping stories, creating music, and even writing code. This inventiveness provides fresh opportunities for exploration and innovation for writers, artists, and developers.



By automating routine processes, generative models have the potential to significantly boost productivity. For instance, they can produce content for product descriptions, customer service responses, and articles, allowing companies to concentrate on more important activities while spending less on labour.

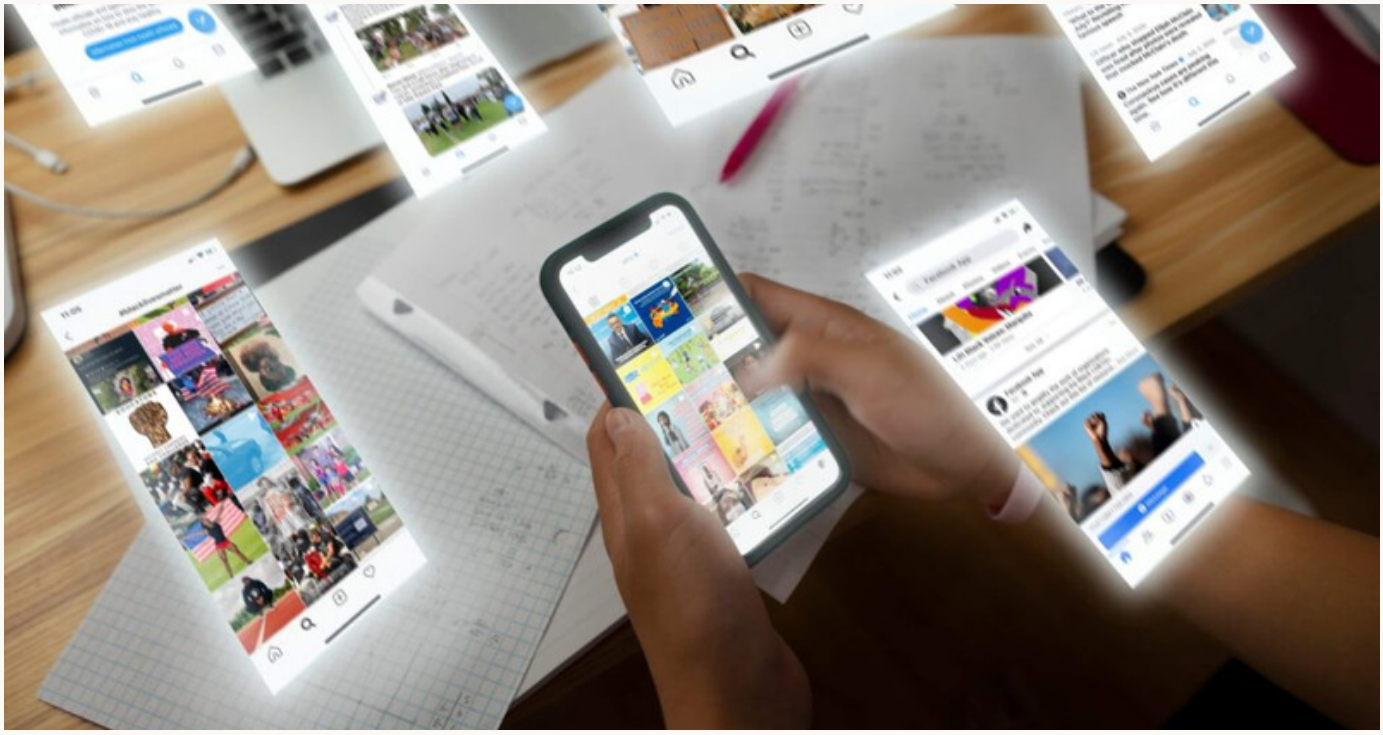
The Bad

Generative models have raised significant ethical concerns, primarily related to their potential for misuse. They can be used to create fabricated images, deepfake videos, spread disinformation, and impersonate individuals, leading to privacy breaches and misinformation. Generative models can inadvertently perpetuate bias present in their training data. The generated content might exhibit bias if the data used to train these models were biased which could result in biased results in a variety of applications.

AI-generated content blurs the boundaries of intellectual property, making it difficult to establish ownership and prevent copyright infringement. In the creative sectors, this may result in legal battles and uncertainty. There have been a lot of cases where artists have reported that some models, had used their art style to generate content.

Conclusion

Undoubtedly a two-edged sword, generative models present both serious challenges and tremendous benefits. It is important to strike a balance between innovation and accountability as we continue to harness the power of these AI innovations. Maximising the benefits and minimising the drawbacks of generative models require taking important actions such as establishing ethical standards, being open about how AI is developed, and conducting continuing bias mitigation research. By doing this, we can make sure that these amazing technologies are applied to improve our lives while avoiding any potential risks.



HOW SOCIAL MEDIA'S TIME-WARPING ALGORITHMS KEEP YOU HOOKED

BY NORIKA UPADHYAY

Have you been in this situation? You're in the middle of doing homework and you come across a particularly difficult question. So, you decide to take a break and open your favorite social media, promising yourself to only view a couple posts. But as you scroll, minutes turn into hours. Suddenly you've lost your entire afternoon and you are completely unmotivated to continue your work. You will find that this addictive scrolling that leaves you uninspired is not a bug in the algorithm but rather a feature, purposefully engineered that way by the social media platforms.

The design of algorithms, often aimed at maximizing user engagement and screen time, exerts a powerful influence on the brain's cognitive functions. As social media usage escalates, the anterior insula cortex bears the brunt of the assault. The anterior insula cortex is a region of the brain that is intricately tied to decision-making and overall awareness. Social media algorithms target this region of the brain coaxing the region into a state of deterioration. The outcome is a diminished sense of general awareness, a phenomenon that sets the stage for a cycle of heightened social media engagement. The allure of dopamine, the brain's feel-good neurotransmitter, becomes a driving force in this equation. Repetitive scrolling can propel users to seek out intermittent bursts of pleasurable sensation, fueling an addictive loop that keeps them tethered to their screens.

These negative effects persist even after turning off the screen. The prolonged exposure, coupled with the toll on the anterior insula cortex, leaves users grappling with a sense of inertia, lazy and drowsy. The aftermath of this digital interaction casts a shadow that extends far beyond the virtual realm, manifesting in tangible effects on real-world productivity.

Next time you need to take a break, consider other ways to rest your brain.