

Undergraduate Thesis Prospectus

Media Recommendation in the Age of Streaming

(technical research project in Computer Science)

The Internet Addiction Recovery Movement in the United States

(sociotechnical research project)

by

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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## **General Research Problem**

*How does media-related technology affect its users?*

As video streaming, audio streaming, and video games become more popular each year, we should consider how these relatively new technologies are affecting their users. Video streaming apps alone had \$72 billion in revenue in 2021, with projections expecting this number to hit \$247 billion by 2027 (Durrani, 2023). Such a large market presents corporations such as Netflix and Disney with a huge incentive for improving their research and development programs: a better product means increased market share. It also has large potential social implications, as these services are being used by millions daily. Studying the impacts of media technology can thus lead to more revenue for businesses as well as a better understanding of individuals should interact with these services to maximize their well-being.

## **Media Recommendation in the Age of Streaming**

*How can personalization strategies be most effectively utilized in recommending TV shows and movies to users of streaming service providers?*

For my computer science capstone, I will discuss my experiences at my last internship. During this internship, I worked at IMDb.com (Internet Movie Database), specifically on an application which lets users get recommended TV shows and movies for all their different streaming services. This application produced recommendations based on genre preferences and trending titles, so that users could find previously unknown content that interests them. I do not yet have a technical advisor.

## **The Internet Addiction Recovery Movement in the United States**

*In the US, how have recovered internet addicts applied their experience toward the prevention of internet addiction in others?*

Defined by the American Psychology Association as “a behavioral pattern characterized by excessive or obsessive online and offline computer use that leads to distress and impairment,” internet addiction has grown to be a common and troubling issue in the US, especially post-pandemic. A recent, post-COVID-19 study found that 14% of US adult participants had “definite or severe” internet addiction, with an additional 41% having “probable addiction or risk of addiction” (Khubchandani et al., 2021). This is concerning when placed within the context of internet addiction’s associated mental disorders. Internet addiction has been found to be correlated with depression, anxiety, and interpersonal sensitivity in college students (Kumar and Mondal, 2018), and low emotional intelligence (Saraiva et al., 2018). Many groups are attempting to help mitigate the effects of this growing problem; among these are recovered addicts.

Studies have shown that addiction recovery programs, specifically those involving social situations with other addicts and recovered addicts such as Alcoholics Anonymous (AA), are oftentimes more effective than traditional recovery methods, and lead to more abstinence with respect to the addictive substance (Kelly et al., 2020). It’s worth investigating the efficacy of similar programs on internet addiction. Other forms of behavioral intervention that are shown to be effective for gambling and drug addiction, such as cognitive behavioral therapy, cognitive advancement therapy, cognitive bias modification, and mindfulness-based stress reduction

(MBSR) may also be promising when applied to internet addiction. For example, internet addiction has strong correlations with high stress, and therefore MBSR is a good candidate for effective treatment, especially in women (Dong and Potenza, 2014). However, these techniques need further data to be deemed effective or otherwise, despite current models of internet gaming disorder and related domains showing promise for being effectively targeted by these therapies (Dong and Potenza, 2014).

Advocacy groups such as Internet and Technology Addicts (ITAA) and Reboot & Recover help addicts in overcoming their addiction. ITAA does this through narcotics-anonymous style group sessions, and has grown significantly in popularity since its inception. During its first year of operation only a few members were involved; however, now there are “over 100 weekly online meetings and a dozen face-to-face meetings around the world”, with members “[that] hail from over 80 countries” (ITAA, 2023). Regardless of its efficacy, there is clearly a market for social-based recovery programs run by former addicts. Reboot & Recover uses traditional one-on-one therapy as its main form of treatment, as well as an interesting social-media based challenge to encourage lower screen time. The “#ScreenTimeChallenge” was created by R&R and involves the participant sharing their screen time online to create a sort of social accountability. The lack of anonymity, creates an especially powerful force for change: one likely doesn’t want their loved ones to see their high screen time numbers. Another participant is HealthyGamerGG, a website founded by a Harvard-trained psychiatrist and recovered addict with associated YouTube and Twitch channels, who provides resources through a medium which many addicts are familiar with (video-streaming platforms). Popular videos include topics such as “How Years of Porn Consumption Affects Brain’s Ability to Form Relationships” and interviews/unofficial therapy sessions with popular video game

streamers discussing their addictions and possible remediation strategies. These familiar formats of YouTube and Twitch can help lower the barrier to addicts seeing help; the YouTube channel alone has around 260 million total views and almost 2 million subscribers. Another group of participants is social media companies like TikTok that try to create internet addiction in their users through recommendation algorithms (Smith, 2021). Guillaume Chaslot, the founder of Algo Transparency, a French group dedicated to deciphering social media says “This system means that watch time is key. The algorithm tries to get people addicted rather than giving them what they really want,” referring to the TikTok algorithm (Smith, 2021). The goal of these companies is purely maximum engagement, not quality content recommendation (unless it benefits engagement and revenue), as Chaslot continues: “Each video a kid watches, TikTok gains a piece of information on him. In a few hours, the algorithm can detect his musical tastes, his physical attraction, if he’s depressed, if he might be into drugs, and many other sensitive information. There’s a high risk that some of this information will be used against him. It could potentially be used to micro-target him or make him more addicted to the platform” (Smith, 2021). This sort of conflict of interest between the companies and their users should be both studied and likely addressed to try and evaluate the root cause behind internet addiction.

## References

- Smith (2021). *How TikTok Reads Your Mind*. nytimes.com.  
<https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>
- Internet and Technology Addicts Anonymous. internetaddictsanonymous.org  
<https://internetaddictsanonymous.org/about/>
- Reboot & Recover. rebootandrecover.org <https://rebootandrecover.org/about-us/>
- HealthyGamerGG. healthygamer.gg <https://www.youtube.com/c/HealthyGamerGG> (YouTube channel)
- Kumar, M., & Mondal, A. (2018). A study on Internet addiction and its relation to psychopathology and self-esteem among college students. *Industrial psychiatry journal*, 27(1), 61–66. [https://doi.org/10.4103/ipj.ipj\\_61\\_17](https://doi.org/10.4103/ipj.ipj_61_17)
- Khubchandani, J., Sharma, S., & Price, J. H. (2021). COVID-19 Pandemic and the Burden of Internet Addiction in the United States. *Psychiatry International*, 2(4), 402–409. MDPI AG.
- Saraiva, J., Esgalhado, G., Pereira, H., Monteiro, S., Afonso, R. M., & Loureiro, M. (2018). The relationship between emotional intelligence and internet addiction among youth and adults. *Journal of Addictions Nursing*, 29(1), 13–22.  
<https://doi.org/10.1097/jan.0000000000000209>
- Durrani, Ana (2023, March 27). *The Average American Spends Over 13 Hours A Day Using Digital Media—Here’s What They’re Streaming*. Forbes.  
<https://www.forbes.com/home-improvement/internet/streaming-stats/>
- Kelly JF, Humphreys K, Ferri M. (2020). Alcoholics Anonymous and other 12-step programs for alcohol use disorder. *Cochrane Database of Systematic Reviews*, Issue 3.  
<https://doi.org/10.1002/14651858.CD012880.pub2>

Dong, G., Potenza, M. A cognitive-behavioral model of Internet gaming disorder: Theoretical underpinnings and clinical implications. *Journal of Psychiatric Research*. 58, 7-11