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**Vivekanand Education Society's Institute of Technology**

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**Department of Computer Engineering**

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**TE Mini Project 2A / 2B Synopsis Template (2022-23) / Semester V**

**I-Detox**

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**Abstract:**

Internet addiction refers to excessive internet use that interferes with daily life. Due to its negative impact on college students' study and life, discovering students’ internet addiction tendencies and making correct guidance for them timely is necessary. In this system, we provide an approach to estimating a person's internet addiction levels using their behavior data on the system. In detail, we consider a person's addiction to the internet as a hidden variable that affects students’ daily time online together with other behavior. By predicting a person’s daily time online, we will find a person’s internet addiction levels. Finally, extensive experiments are conducted on a real-world dataset. The experimental results show the effectiveness of our method, and it is also consistent with some psychological findings. “I-detox” aims to provide real-time analysis of the exact number of websites visited by the user, giving them the freedom to foresee the probable results given the lack of schedule one follows while browsing the internet. Therefore, this gives a standardized analysis of the web history of the user also inclining the time being spent on websites surfed by the user. Our solution considers the suitability of terming the user as an addict or not based on the analysis provided upfront. Also, the tool can further be developed to encourage and know the mental state of the user based on his web-browser history and through some questionnaires, thus helping the user as a self or someone concerned with the particular person in question to know about his/her mental health being leaving out an option on seeking professional health or not! With the help of an artificial intelligence-based system, we tend to provide a humble service to the people of our society.

**Keywords:** internet, internet-addiction, websites, analysis, artificial intelligence,

web page classification, classification, categorization, deep learning, RNN, transfer learning

**Introduction**

Addictive digital experiences are becoming extremely common in the tech industry and the adjective “addictive” is now considered one of the highest compliments paid to an artifact . Existing research has explored what is considered addictive, what are the approaches and strategies performed by tech companies that eventually lead to addiction, and how cultural and societal pressures have contributed to this phenomenon. From a health standpoint, it is currently assumed that behaviors like binge-watching videos, playing online games, and posting on social networks can be addictive. Addiction to technology has grown into a fully recognized disorder [1].

For any machine learning algorithm, we need some training set and test set for training the model and testing the accuracy of that model. Hence to create the set of data for the model, we already have the text from different websites, we will just classify them according to the keywords, and then apply the results.“I-detox” can be used from the young to the old because, in the age of digitalization, one never knows the extent of addiction one is suffering. Our solution gives the user a clear idea about the number of websites being seen, the type of content being surfed upon, the category it belongs to, and the URL.

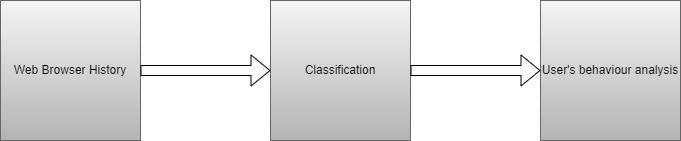
**Problem Statement**

“I-detox” hopes to provide the user with an analysis of the number of websites visited by the user, the time spent by the user on each website and thus giving him an idea of his browsing method and the probability of being addicted to any of them. It provides a standardized approach for the user to assess his browsing pattern and also classifies the website based on which the user is able to understand the category of content he is browsing and whether it will lead to addiction. Artificial Intelligence and Machine learning-based approaches for the prediction of addiction and to classify the websites into categories. Based upon the data extracted from the user’s browsing history which includes the websites, time-stamp, and categories the model would test the data and give the user the exact idea of his browsing pattern. There are some common categories to which websites belong and the ones visited by the user have a timestamp associated with them. The solution will focus on both the categories and the time-stamp. For the categories, the solution will take into consideration the URLs and the bag of words from the websites. For the time-stamp, the user browsing history will be used which also provides the time-stamp of each website browsed. “I-detox” would thus indicate to the user if he requires any help to stop himself from being addicted to any harmful website.

**Proposed Solution**

Since 2001, the number of internet users has shot up by [1000%](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4804263/). The internet certainly offers a lot of [potentially addictive activities](https://www.frontiersin.org/articles/10.3389/fpsyg.2016.00842/full): shopping, gambling, chat discussions, online relationships, gaming, information-seeking, and pornography viewing. Most people know what it’s like to get drawn into spending more time online than they had planned, but for some people, it becomes a consuming addiction. [Internet addiction](https://www.therecoveryvillage.com/process-addiction/internet-addiction/) intersects with many other process addictions, including [internet gaming disorder](https://www.therecoveryvillage.com/mental-health/who-classifies-gaming-disorder-disease/), online [gambling addiction](https://www.therecoveryvillage.com/process-addiction/compulsive-gambling/), and online [pornography addiction](https://www.therecoveryvillage.com/process-addiction/porn-addiction/). Overall, the [concept](https://www.frontiersin.org/articles/10.3389/fpsyg.2016.00842/full) is that someone cannot control their use of the internet despite negative consequences. Some people even experience [serious withdrawal symptoms](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4023098/) when they are away from the internet.[2][4].  
We intend to develop an artificial intelligence-based system to provide a service to people not only to the ones who are addicted or are finding themselves detached from the outer world but also to every other user who has a digital presence on the internet. The user can always track and analyze his use of the internet, based on the data provided by the system. Not only grown-up adults but also teenagers and youth can lead in the wrong direction because of the internet. With the help of our system, parents can always keep a track of their activities, the time spent provided by the time-stamps our system assists with, and the nature of the websites being visited with their corresponding website URLs. This system can be used to identify potentially malicious websites containing explicit content given it identifies the system with the keywords of its content. The model would be further trained to analyze the mental well-being of the user by analyzing the data collected from his browser and also with the help of questionnaires. This would also turn in to help the user as much as possible to deal with these facts and get professional help if needed!

**Methodology / Block Diagram**

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**Hardware, Software and tools Requirements**

**Software Requirements:**

● **Language**: Python

● **IDE**: Pycharm IDLE

● **Optional Cloud resources**: Python Anywhere Connect

● **Deployment Framework**: Flask

● **To build the application**: Flask, Django

**Hardware Requirements:**

* 2 Gb Ram
* Intel Pentium Gold Processor and above / Ryzen Athelon and above
* 512 Mb Physical Storage and above

**Proposed Evaluation Measures**

The primary goal of the model is to provide the user an analytical review about his use of the internet. This comes in with the data being hooked out of the websites or data visited/implemented by the user on these digital networks. In this project, we will later train to understand and analyze the user’s mind-set through the data he is searching, looking out or entering on his browser. This eventually will lead up to analyzing the person himself in question and whether he/she is in dire need of professional help if necessary.

* With the help of the browser-history module in python, the data/ web history can be imported off the web browser onto a csv file.[8]
* This csv file shall serve as a purpose of analysis for the user which would provide exact time-stamps, website address, their urls along with the bag of words or recent keywords being searched on that website and the type of the website.

**Conclusion**

Addiction is a serious issue in India that is often ignored and undermined. While a smartphone, tablet, or laptop proved to be of immense use during the pandemic era, these devices can interfere with work, school and relationships too. When one starts to spend more time on these devices instead of socializing, having a good game of soccer, or a meet in the park with friends, it might be time to reassess our use of technology.

Amongst every form of addiction, internet / virtually social addiction charts second in the list with an exaggerating rate of 16.9% per 100 persons mostly containing people in age group 16-50 who find themselves socially awkward and probiotic or also termed as “nomophobia” in scientific terms.[3][5][6]

In this project, we propose an artificial intelligence-based system that can help the recipient analyze for himself his use of the internet. This system can work with people of all age groups with parents using it to keep a check on their ward’s internet life to the people who find themselves lost in this huge digital world. This system would help the user have a personalized analysis and a fact check about his presence on the internet, the activities he performs, the content he streams to the games he plays because of the availability of time-stamps recording details of every thin activity. Thus, the question in person with the help of our system can reconcile his use of the internet thus helping him curb and storm out his way through these addiction demons.

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