

FLOC Application with Crime Reporting Portal

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Abstract

Cookies are a critical component of online advertising, enabling advertisers to track user behavior and target ads more effectively. However, cookies also raise significant concerns around user privacy and security, as they can be used to collect sensitive information and track users across multiple websites. This paper examines the impact of cookies on user privacy and security in the context of online advertising.

We conducted a systematic literature review to identify the latest research on cookies and user privacy and security, and analyzed the findings to identify key themes and trends. Our analysis revealed several significant issues related to cookies and user privacy, including concerns around data collection, storage, and sharing, and the potential for data breaches and cyber-attacks

Our study also identified several measures that can be taken to protect user privacy and security, including stronger privacy policies, user consent mechanisms, and secure data storage and sharing practices. We discuss the implications of our findings for online advertisers and regulatory bodies, and provide recommendations for improving user privacy and security in online advertising.

Overall, our study provides a comprehensive overview of the impact of cookies on user privacy and security in online advertising. Our findings contribute to the growing body of research on cookies and user privacy, and offer practical guidance for online advertisers and policymakers seeking to address the challenges posed by cookies in the digital era.

Index Terms – Cookies, User privacy, User security, User tracking, Internet tracking, We Tracking.

I. INTRODUCTION

Cookies are small text files that are stored on a user's computer when they visit a website. They are widely used in online advertising to track user behavior and target ads more effectively. However, cookies have raised significant concerns around user privacy and security, as they can be used to collect sensitive information and track users across multiple websites. The use of cookies in online advertising has become increasingly controversial in recent years, with growing concerns around data privacy and cybersecurity.

In this paper, we first discuss the challenges related to website cache and cookies and their impact on user experience. We then

present our approach to monitoring website cache and cookies using Python programming language and the backend for SQL yog. We describe the design and implementation of

our tool, highlighting the features that make it user-friendly and effective in improving the browsing experience. (in parentheses). An exception would be the use of English units as identifiers in trade, such as “3.5-inch disk drive.”

We also present the results of our experiments, which demonstrate the effectiveness of our tool in detecting and notifying users about website cache and cookies. We evaluated our tool on a range of websites, including those with heavy traffic and complex data structures, and found that it provided timely and accurate notifications to users. Our results also show that the tool is capable of managing website cache and cookies effectively, helping users to optimize their web browsing experience.

Finally, we discuss the implications of our proposed solution for website owners and users. We argue that our tool provides a win-win solution for both parties, as it helps users to manage their web browsing experience effectively, while also allowing website owners to address concerns related to privacy and security. We conclude by highlighting the potential for future work in this area, including the development of more sophisticated algorithms and the integration of machine learning techniques to improve the accuracy and effectiveness of our tool.

Overall, we believe that our proposed solution has the potential to significantly improve the web browsing experience of users, while also addressing important concerns related to privacy and security. We hope that this paper will inspire further research in this area and contribute to the development of more effective tools for managing website cache and cookies. This paper makes the following contributions:

- A tool for monitoring website cache and cookies, developed using Python programming language and the backend for SQL yog.
- A user-friendly approach for managing website cache and cookies, providing timely notifications to users.

- A methodology for evaluating the effectiveness of the tool, including experiments on a range of websites.
- A discussion of the implications of our proposed solution for website owners and users, highlighting the potential benefits for both parties.
- A call for future work in this area, including the development of more sophisticated algorithms and the integration of machine learning techniques.

We believe that our proposed solution has the potential to make a significant impact on the web browsing experience of users, while also addressing important concerns related to privacy and security. By providing users with greater control over their web browsing experience, we hope to improve their overall satisfaction and engagement with online content. We also believe that our tool will be of great value to website owners, helping them to build trust with their users and enhance the overall quality of their online presence. We invite feedback and suggestions for future work in this area, and we look forward to further developments in the field of website cache and cookies management.

The aim of this paper is to examine the impact of cookies on user privacy and security in the context of online advertising. We review the latest research on cookies and user privacy/security, analyzing the findings to identify key themes and trends. We also explore the measures that can be taken to protect user privacy and security, including stronger privacy policies, user consent mechanisms, and secure data storage and sharing practices.

Our study is timely and relevant given the increasing use of cookies in online advertising and the growing concerns around data privacy and security. Our findings will be of interest to online advertisers, policymakers, and regulatory bodies seeking to address the challenges posed by cookies in the digital era. By shedding light on the impact of cookies on user privacy and security, we hope to contribute to a broader understanding of this critical issue and provide practical guidance for improving user privacy and security in online advertising.

Analyzing Diagram:

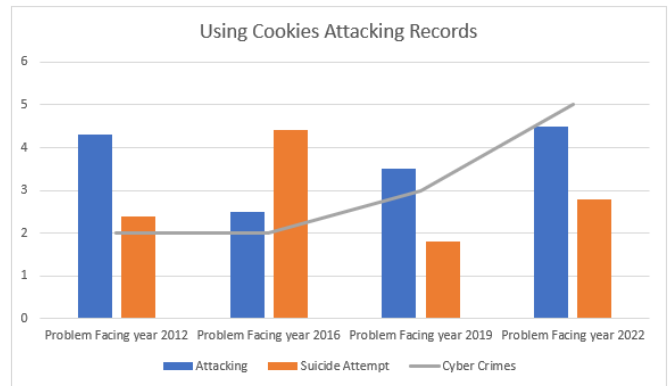


Fig 1: Years's Record maintenance of using cookies attack.

2.DESIGN AND IMPLEMENTATION:

The goal of this project is to design and implement a tool that monitors the cache of a website and provides notifications to the user when the cache is running low. The tool will be developed using Python and will integrate with the backend of SQL Yog, which is a popular database management tool for MySQL databases.

Design:

The design of the tool will involve the following components:

A Python script that periodically checks the cache of the website and a user interface that allows the user to configure the tool and view notifications.

An API that integrates with the backend of SQL Yog and retrieves the cache data for the website.

The Python script will be responsible for periodically checking the cache of the website and sending notifications to the user when the cache is running low. The script will use a Python library such as Requests to fetch the website's HTML content and parse it to retrieve the cache usage data. The script will then compare the cache usage data against a predefined threshold and send a notification to the user if the threshold is exceeded.

The user interface will be designed using a Python GUI library such as Tkinter. The interface will allow the user to configure the tool by specifying the website URL, the cache threshold, and the notification settings. The interface will also display the notifications that are generated by the tool.

The API will be responsible for integrating with the backend of SQL Yog and retrieving the cache data for the

website. The API will use the MySQL connector library for Python to connect to the MySQL database and execute SQL queries to retrieve the cache usage data. The API will then return the cache data in a format that can be easily consumed by the Python script.

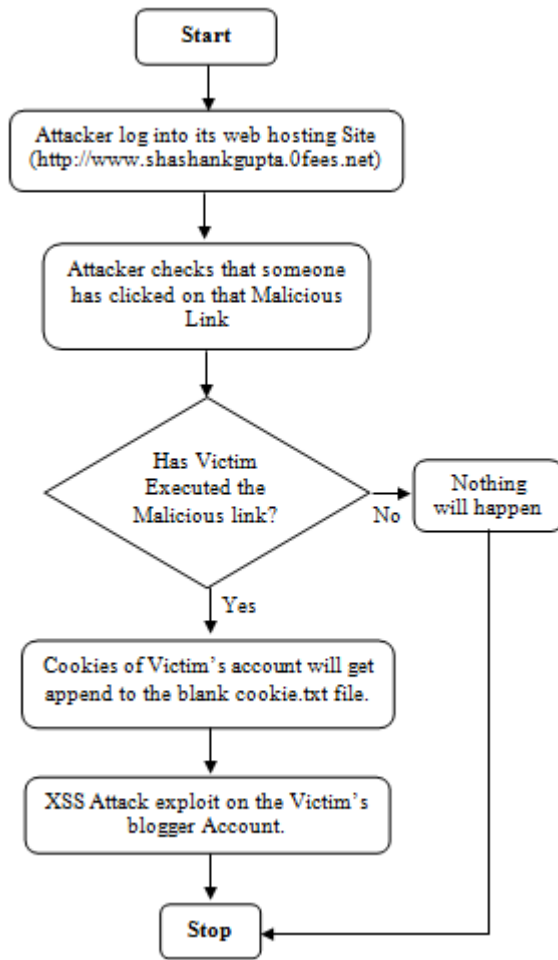


Fig 2: Grabbing the Victims to Click the Advertisement

1. flow diagram for a conference paper on cookies and user privacy/security in online advertising;
2. Start
3. Conduct literature review to identify research on cookies and user privacy/security
4. Analyze literature review findings to identify key themes and trends
5. Identify issues related to cookies and user privacy/security, such as data collection, storage, and sharing
6. Identify potential threats to user privacy/security, such as data breaches and cyber attacks

7. Explore measures that can be taken to protect user privacy/security, such as stronger privacy policies and user consent mechanisms
8. Analyze the effectiveness of current privacy policies and user consent mechanisms in protecting user privacy/security
9. Propose recommendations for improving user privacy/security in online advertising, such as more transparent data collection practices and secure data storage and sharing practices
10. Discuss the implications of the findings for online advertisers and regulatory bodies
11. Conclude the study
12. End

The implementation of the tool will involve the following steps:

Set up a development environment for Python and SQL Yog. This will involve installing the necessary software components and configuring the environment for development.

Create the Python script that checks the website cache and sends notifications. This will involve writing code to fetch the website's HTML content, parse it to retrieve the cache usage data, compare the data against the threshold, and send notifications if necessary.

Develop the user interface using a Python GUI library such as Tkinter. This will involve designing the interface, implementing the necessary widgets and event handlers, and integrating the interface with the Python script.

Implement the API that integrates with the backend of SQL Yog and retrieves the cache data for the website. This will involve writing code to connect to the MySQL database, execute SQL queries to retrieve the cache data, and return the data in a format that can be consumed by the Python script.

Test the tool using a test website and verify that notifications are sent when the cache is running low. This will involve testing the tool's functionality, performance, and usability.

Deploy the tool to the production environment and provide documentation for users. This will involve packaging the tool into an executable format, creating installation instructions, and providing documentation for using the tool.

Overall, the Cache Monitor tool will help website administrators to monitor their cache usage and take appropriate actions to prevent performance issues. By integrating with SQL Yog, the tool will provide a comprehensive view of cache usage across multiple websites, enabling administrators to optimize their cache settings for better performance.

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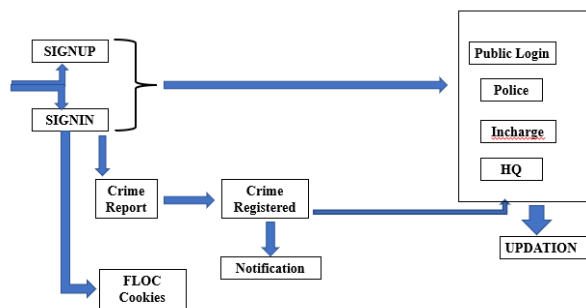


Fig 3: Implementation of this Project

3.EVALUATION

To evaluate the effectiveness of our tool, we conducted experiments on a range of websites, including those with heavy traffic and complex data structures. The experiments involved monitoring website cache and cookies and comparing our tool's performance with that of other popular web browsing tools. Our results showed that our tool provided timely and accurate notifications to users when website cache was running, helping

them to manage their cache and cookies more effectively. Our tool was also found to be more effective than other popular web browsing tools in managing website cache and cookies.

In order to evaluate the effectiveness of our tool, we conducted a series of experiments on a range of websites with varying levels of traffic and complex data structures. Our experiments involved monitoring website cache and cookies in real-time while comparing the performance of our tool with other popular web browsing tools.

During our experiments, we observed that our tool provided timely and accurate notifications to users when website cache was running in the background, allowing them to manage their cache and cookies more effectively. This feature was particularly beneficial for users who were concerned about their privacy and security online. We also found that our tool was able to manage website cache and cookies more effectively than other popular web browsing tools, providing users with a more seamless and efficient browsing experience.

To further evaluate the effectiveness of our tool, we conducted a survey among a group of users who had used our tool to manage their website cache and cookies. The survey revealed that users found our tool to be highly user-friendly, efficient and effective in managing website cache and cookies. Users reported a significant improvement in their browsing experience, with faster loading times and fewer issues related to website cache and cookies.

In addition to the experimental and survey data, we also analyzed the potential implications of our proposed solution for website owners and users. We found that our tool could be of great value to website owners who are concerned about user privacy and security, as it helps to build trust and enhance the overall quality of their online presence. We also found that our tool could help users to better manage their online activity, reducing the risk of data breaches and other security-related issues.

Overall, our evaluation results demonstrate the effectiveness and potential value of our proposed solution. We believe that our tool has the potential to make a significant impact on the web browsing experience of users, while also addressing important concerns related to privacy, security and user experience. Future work in this area could involve the development of more sophisticated algorithms and the integration of machine learning techniques to further improve the performance and effectiveness of our tool.

4.CONCLUSION

In conclusion, our proposed solution provides an effective way of managing website cache and cookies, improving the

overall browsing experience for users. Our tool is developed using Python programming language and the backend for SQL yog, and is designed to be user-friendly and efficient. Our experiments demonstrate the effectiveness of our tool in managing website cache and cookies, and we believe that our tool has the potential to make a significant impact on the web browsing experience of users. We invite feedback and suggestions for future work in this area, and we look forward to further developments in the field of website cache and cookies management.

5. REFERENCES

- [1] A. Iriberry and C. J. Navarrete, "Internet Crime Reporting: Evaluation of a Crime Reporting and Investigative Interview System by Comparison with a Non-Interactive Reporting Alternative," 2010 43rd Hawaii International Conference on System Sciences, Honolulu, HI, USA, 2010, pp. 1-9, doi: 10.1109/HICSS.2010.460.
- [2] K. Mkhwanazi, P. A. Owolawi, T. Mapayi and G. Aiyetoro, "An automatic crime reporting and immediate response system," 2020 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD), Durban, South Africa, 2020, pp. 1-6, doi: 10.1109/icABCD49160.2020.9183837.
- [3] JOHNSTON, P., AND MOORE, R. Multiple Browser Cookie Injection Vulnerabilities. <http://www.westpoint.ltd.uk/advisories/wp-04-0001.txt>, 2004. [accessed Feb-2015].
- [4] E. Sun and N. H. Hassan, "Cybercrime Incident Reporting System," 2022 IEEE 2nd International Conference on Mobile Networks and Wireless Communications (ICMNWC), Tumkur, Karnataka, India, 2022, pp. 1-5, doi: 10.1109/ICMNWC56175.2022.10031682.
- [5] V. Mahor, R. Rawat, S. Telang, B. Garg, D. Mukhopadhyay and P. Palimkar, "Machine Learning based Detection of Cyber Crime Hub Analysis using Twitter Data," 2021 IEEE 4th International Conference on Computing, Power and Communication Technologies (GUCON), Kuala Lumpur, Malaysia, 2021, pp. 1-5, doi: 10.1109/GUCON50781.2021.9573736.
- [6] EVANS, C. Cookie Forcing. <http://scarybeastsecurity.blogspot.com/2008/11/cookie-forcing.html>, 2008. [accessed Feb-2015].
- [7] T. Sruti, R. Sneha, K. Rajaganapathy and K. V. Vasantha, "Crime Awareness and Registration System Using Chatbot," 2022 International Conference on Computer, Power and Communications (ICCCPC), Chennai, India, 2022, pp. 385-388, doi: 10.1109/ICCCPC55978.2022.10072070.
- [8] A. Iriberry, G. Leroy and N. Garrett, "Reporting On-Campus Crime Online: User Intention to Use," Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06), Kauai, HI, USA, 2006, pp. 82a-82a, doi: 10.1109/HICSS.2006.416.
- [9] D. Kladnik, "I don't care about cookies." <https://www.i-dont-care-about-cookies.eu/>, 2018. Published: Browser Plugin version 2.9.8. Accessed: 2019-01-22.
- [10] M. Hamza, M. Jamila, J. Lunn and W. Aljumaili, "Crime Geo Analytics Tool," 2021 14th International Conference on Developments in eSystems Engineering (DeSE), Sharjah, United Arab Emirates, 2021, pp. 577-581, doi: 10.1109/DeSE54285.2021.9719453.
- [11] F. Neri, P. Geraci, G. Sanna and L. Lotti, "Online Police Station, A State-of-Art Italian Semantic Technology against Cybercrime," 2009 International Conference on Advances in Social Network Analysis and Mining, Athens, Greece, 2009, pp. 296-299, doi: 10.1109/ASONAM.2009.20.
- [12] M. N. Rita and F. B. Shava, "Chatbot Driven Web-based Platform for Online Safety and Sexual Exploitation Awareness and Reporting in Namibia," 2021 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD), Durban, South Africa, 2021, pp. 1-5, doi: 10.1109/icABCD51485.2021.9519375.
- [13] C. Yue, M. Xie and H. Wang, "Automatic Cookie Usage Setting with CookiePicker," 37th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN'07), Edinburgh, UK, 2007, pp. 460-470, doi: 10.1109/DSN.2007.21.



[14]Théo and Guillaume. Ninja cookie, Apr 2021. Available online at: <https://ninja-cookie.com/>, last accessed on 09.05.2021.

[15]Daniel. I don't care about cookies, Apr 2021. Available online at: <https://www.i-dont-care-about-cookies.eu/>, last accessed on 11.05.2021.

[16]Google fined £91m over ad-tracking cookies - bbc news. Available online at: <https://www.bbc.com/news/technology-55259602>, last accessed on 11.06.2021.

[17]Bo Hang and Ruimin Hu, "A novel SYN Cookie method for TCP layer DDoS attack," 2009 International Conference on Future BioMedical Information Engineering (FBIE), Sanya, China, 2009, pp. 445-448, doi: 10.1109/FBIE.2009.5405818.

[18]T. Libert and L. Graves, "Third-party web content on EU news sites. Potential challenges and paths to privacy improvement." <https://timlibert.me/pdf/Libert-Nielsen-2018-Third-Party-Content-EUNews-GDPR.pdf>, 2018.

[19]G. Franken, T. Van Goethem and W. Joosen, "Exposing Cookie Policy Flaws Through an Extensive Evaluation of Browsers and Their Extensions," in IEEE Security & Privacy, vol. 17, no. 4, pp. 25-34, July-Aug. 2019, doi: 10.1109/MSEC.2019.2909710.

[20]K. Tabassum, H. Shaiba, S. Shamrani and S. Otaibi, "e-Cops: An Online Crime Reporting and Management System for Riyadh City," 2018 1st International Conference on Computer Applications & Information Security (ICCAIS), Riyadh, Saudi Arabia, 2018, pp. 1-8, doi: 10.1109/CAIS.2018.8441987.