YarWeb: Web-based Generic YARA Rule Generator

A PROJECT REPORT

Submitted by,

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Under the guidance of,

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in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)

At

PRESIDENCY UNIVERSITY

BENGALURU

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PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report **"YarWeb"** being submitted by "SHREYAS BIJU, KAILAS M K, LAALAS TADAVARTHY, GOWRISHANKAR T O" bearing roll number(s) "20201CCS0108, 20201CCS0118, 20201CCS0119, 20201CCS0121" in partial fulfilment of requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering (Cyber Security) is a bonafide work carried out under my supervision.

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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **YarWeb** in partial fulfilment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering (Cyber Security)**, is a record of our own investigations carried under the guidance of **Ms. SRIDEVI S, ASSISTANT PROFESSOR, School of Computer Science Engineering, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

In the modern digital landscape, the threat of malware and adware has significantly escalated, posing a challenge to the security of sensitive information. YarWeb, a web-based application, emerges as a critical tool in this context, revolutionizing the generation of YARA rules for effective malware detection. Designed with both novices and experts in mind, YarWeb simplifies the complex process of cybersecurity, making it accessible and user-friendly.

At its core, YarWeb excels in automating the creation of YARA rules from user-uploaded malicious files, streamlining the detection process with an impressive average accuracy of 0.80. This functionality not only accelerates the identification and mitigation of cybersecurity threats but also enhances user engagement in digital security practices.

Beyond its technical prowess, YarWeb serves as an educational platform, increasing awareness and understanding of cybersecurity risks among a broader audience. Its role in educating and empowering users is pivotal, contributing to the development of a more knowledgeable and resilient online community.

As a search engine-based model, YarWeb's versatility and practicality stand out, embodying the integration of advanced technology with a user-centric approach. It marks a significant advancement in cybersecurity tools, bridging the gap between sophisticated technologies and comprehensive digital security education, thereby positioning itself as an invaluable asset in the ongoing battle against cyber threats.

Keywords - Cybersecurity, YARA rules, Generic Rules, Automation Efficiency, Malware signatures, Malicious Strings.