

Cybersecurity Portal for Effective Management of Servers and Firewalls

Submitted by,

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Under the guidance of,

Ms.Sterlin Minish T N

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

At



PRESIDENCY UNIVERSITY

BENGALURU

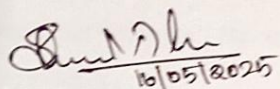
MAY 2025

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CERTIFICATE

This is to certify that the Internship/Project report "CYBER SECURITY PORTAL FOR EFFECTIVE MANAGEMENT OF SERVERS AND FIREWALLS" being submitted by "VAIBHAV BHARDWAJ, GAUTHAM CN, JYOTSNA BANAKAR" bearing roll number "20211CCS0052, 20211CCS0103, 20211CCS109" in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a Bonafide work carried out under my supervision.

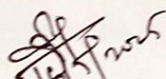


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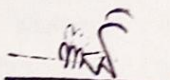


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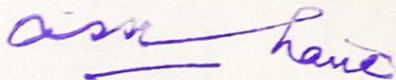


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Dean -School of CSE & IS

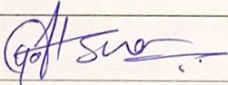
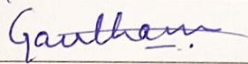
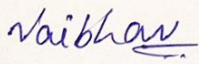
Presidency University

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING DECLARATION

I hereby declare that the work, which is being presented in the report entitled “**CYBER SECURITY PORTAL FOR EFFECTIVE MANAGEMENT OF SERVERS AND FIREWALLS**” in partial fulfillment for the award of Degree of **Bachelor of Technology in Computer Science and Engineering**, is a record of my own investigations carried under the guidance of **Ms. Sterlin Minish T N**, Assistant Professor, **Presidency School of Computer Science and Engineering, Presidency University, Bengaluru**.

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

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ABSTRACT

With the increasing digitization of academic governance and institutional operations, cybersecurity has emerged as a critical pillar for maintaining data integrity, system availability, and user privacy across educational ecosystems. The All-India Council for Technical Education (AICTE), as a central regulatory body overseeing more than 10,000 technical institutions in India, faces the complex challenge of managing and protecting vast amounts of sensitive data and IT infrastructure. Fragmented cybersecurity practices, outdated manual processes, and limited visibility across distributed networks contribute to increased vulnerability to cyber threats and inefficiencies in incident response.

This project introduces the design and development of a centralized Cybersecurity Portal tailored specifically for AICTE. The portal serves as a unified platform for real-time infrastructure monitoring, secure server and firewall configuration, user management, and threat intelligence integration. Core features include a dashboard for system-wide visibility, support for role-based access control (RBAC), OTP-based Multi-Factor Authentication (MFA) for enhanced login security, and seamless integration with third-party APIs to fetch the latest threat indicators.

Developed using modern web technologies including Node.js, Express.js, MongoDB, and JWT for secure authentication, the portal emphasizes scalability, performance, and modularity. The system is designed with a focus on usability, ensuring that administrators at various levels can access and manage cybersecurity components efficiently without requiring extensive technical expertise. By consolidating multiple cybersecurity functions into a single interface, the AICTE Cybersecurity Portal not only reduces the administrative burden but also enhances proactive threat detection and rapid incident response. The implementation of this portal represents a significant step towards a standardized, secure, and responsive digital infrastructure for technical education governance in India.

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We express our heartfelt gratitude to our beloved Associate Dean **Dr. Mydhili Nair**, School of Computer Science Engineering & Information Science, Presidency University, and **Dr. S P Anandaraj**, Head of the Department, School of Computer Science Engineering & Information Science, Presidency University, for rendering timely help in completing this project successfully.

We are greatly indebted to our guide **Ms. Sterlin Minish T N**, Assistan Professor and Reviewer **Dr. Vennira Selvi, Professor**, School of Computer Science Engineering & Information Science, Presidency University for her inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

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We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project

Jyotsna Banakar

Gautham C N

Vaibhav B Bharadwaj