

Review Form 3

Journal Name:	Archives of Current Research International
Manuscript Number:	Ms_ACRI_131412
Title of the Manuscript:	Future-Proofing Data: Assessing the Feasibility of Post-Quantum Cryptographic Algorithms to Mitigate ‘Harvest Now, Decrypt Later’ Attacks
Type of the Article	Research Article

PART 1: Comments

	<div>Reviewer’s comment</div> <div>Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.</div>	<div>Author’s Feedback</div> <div><i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i></div>
<div>Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.</div>	<div>This manuscript addresses a critical and timely issue in cybersecurity by evaluating the feasibility of post-quantum cryptographic (PQC) algorithms to mitigate "Harvest Now, Decrypt Later" (HNDL) attacks. As quantum computing continues to advance, conventional encryption methods such as RSA and ECC face significant vulnerabilities, making the transition to PQC essential for long-term data security. By leveraging statistical modelling, Monte Carlo simulations, and ARIMA forecasting, this study provides valuable insights into the security resilience, industry adoption, and feasibility of quantum decryption threats. The findings contribute to the scientific community by guiding policymakers, industry leaders, and cybersecurity researchers in formulating proactive cryptographic strategies to safeguard sensitive information in the post-quantum era.</div>	<div>Thanks</div>
<div>Is the title of the article suitable? (If not please suggest an alternative title)</div>	<div>Yes, well-structured and relevant to the study's focus.</div>	<div>Ok</div>
<div>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</div>	<div>The abstract of the article is comprehensive and provides a clear overview of the research focus, methodology, key findings, and implications. It effectively highlights the study's evaluation of post-quantum cryptographic (PQC) algorithms against "Harvest Now, Decrypt Later" (HNDL) attacks, referencing datasets, statistical modeling, and forecasting techniques.</div>	<div>Noted</div>
<div>Is the manuscript scientifically, correct? Please write here.</div>	<div>The manuscript appears to be scientifically correct and well-rounded in current research on post-quantum cryptography (PQC) and quantum decryption risks. The study effectively references established sources, such as the NIST Post-Quantum Cryptography Project, Deloitte’s PQC Adoption Survey, and IBM &amp; Google’s Quantum Roadmaps, providing a solid foundation for its claims. Additionally, the application of statistical modeling, Monte Carlo simulations, and ARIMA forecasting to evaluate security resilience, industry adoption, and quantum decryption feasibility aligns with established research methodologies.</div>	<div>Yes</div>
<div>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</div>	<div>The manuscript includes a comprehensive list of references, covering key areas in post-quantum cryptography (PQC), quantum decryption risks, cryptographic resilience, and hybrid encryption models. The cited sources, including reports from NIST (2024), IBM, Google, Deloitte, and recent peer-reviewed articles, indicate that the study is well-grounded in current research.</div>	<div>Ok</div>

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Is the language/English quality of the article suitable for scholarly communications?	The manuscript's language is generally suitable for scholarly communication, demonstrating a high level of technical proficiency and clarity. The writing effectively conveys complex cryptographic and quantum computing concepts in a structured and formal academic style.	Thanks
Optional/General comments		

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	