

ABSTRAK

Perkembangan teknologi informasi telah mengubah pola komunikasi masyarakat secara signifikan, sekaligus memunculkan berbagai bentuk kejahatan siber seperti *cyberbullying* di media sosial. Instagram menjadi salah satu platform yang paling rentan terhadap tindakan ini karena sifatnya yang terbuka dan interaktif. Penelitian ini bertujuan untuk menganalisis penerapan metode *National Institute of Standards and Technology* (NIST) dalam proses investigasi forensik digital terhadap kasus *cyberbullying* di platform Instagram. Metode NIST dipilih karena memiliki tahapan sistematis yang meliputi *collection*, *examination*, *analysis*, dan *reporting* untuk menjamin integritas dan keaslian bukti digital. Penelitian dilakukan dengan pendekatan kualitatif menggunakan simulasi kasus yang merepresentasikan interaksi antara pelaku dan korban secara etis. Proses akuisisi data dilakukan menggunakan perangkat lunak forensik FTK Imager, Autopsy, MOBILedit Forensic Express, dan *Browser History Viewer*. Hasil akuisisi menunjukkan artefak digital berupa pesan, komentar, metadata, serta aktivitas akun yang relevan dengan tindakan *cyberbullying*. Validasi bukti digital dilakukan melalui perhitungan nilai hash (MD-256 dan SHA-1) serta *cross-tool validation* untuk memastikan konsistensi hasil analisis. Temuan penelitian ini menunjukkan bahwa metode NIST efektif dalam mendeteksi, menganalisis, dan melaporkan bukti digital secara sistematis. Selain itu, hasil penelitian menegaskan pentingnya penerapan standar forensik digital untuk mendukung proses penegakan hukum sesuai dengan Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik (ITE). Penelitian ini diharapkan dapat memberikan kontribusi terhadap pengembangan praktik forensik digital di Indonesia serta meningkatkan kesadaran masyarakat terhadap pentingnya keamanan dan etika dalam penggunaan media sosial.

Kata Kunci: Forensik Digital, *Cyberbullying*, Instagram, NIST, Bukti Digital

ABSTRACT

The rapid growth of information technology has profoundly influenced patterns of social interaction while simultaneously creating new challenges, particularly the rise of cyberbullying on social media platforms. Instagram, as one of the most widely used and interactive platforms, often becomes a medium for harmful digital behavior that threatens user well-being and privacy. This research aims to analyze the implementation of the National Institute of Standards and Technology (NIST) method in conducting digital forensic investigations of cyberbullying cases on Instagram. The NIST framework provides a structured methodology consisting of four essential stages collection, examination, analysis, and reporting which ensure the authenticity and integrity of digital evidence. This study employs a qualitative approach using a simulated case that ethically represents interactions between perpetrators and victims. Data acquisition and examination were carried out using FTK Imager, Autopsy, MOBILedit Forensic Express, and Browser History Viewer. The findings reveal that the NIST method effectively identifies digital artifacts, including messages, comments, metadata, and activity logs related to cyberbullying behavior. Evidence validation through hash value verification (MD-256 and SHA-1) and cross-tool validation confirmed data reliability and accuracy. The results demonstrate that applying NIST-based digital forensics supports lawful digital evidence collection aligned with Indonesia's Law Number 11 of 2008 on Electronic Information and Transactions (ITE). This study contributes to the enhancement of digital forensic practices in Indonesia and promotes greater public awareness regarding cybersecurity, digital ethics, and responsible social media use.

Keywords: *Digital Forensics, Cyberbullying, Instagram, NIST, Digital Evidence*