DAFTAR PUSTAKA

[1] F. S. Suwita, "Electronic Certificate Information System as Media for Distributing Certificates Online During the Covid-19 Pandemic," Int. J. Res. Appl. Technol., vol. 3, no. 2, pp. 308–315, 2022.

[2] BADAN SIBER DAN SANDI NEGARA RI, "Lanskap Keamanan Siber Indonesia 2023," 2023. [Online]. Available: https://csirt.kemenkeu.go.id/api/Medias/4b7a023f-7e86-43fa-b877-51697ab24594

[3] P. Reedy, "Interpol review of digital evidence for 2019–2022," *Forensic Sci. Int. Synerg.*, vol. 6, pp. 1–162, 2023, doi: 10.1016/j.fsisyn.2022.100313.

[4] Europol Innovation Lab, "Facing reality? Law enforcement and the challenge of deepfakes," The Hague, 2024. doi: 10.2813/158794.

[5] R. Dermawan, "Pemanfaatan Tanda Tangan Digital Tersertifikasi di Era Pandemi (UTILIZATION OF CERTIFIED DIGITAL SIGNATURES IN THE PANDEMIC ERA)," *J. Huk. Lex Gen.*, vol. 2, no. 8, pp. 762–781, 2021, doi: 10.56370/jhlg.v2i8.95.

[6] L. Amaludin and A. Rahmatulloh, "Penerapan ECDSA dan BLAKE2B Untuk Membentuk Tanda Tangan Digital Sebagai Autentikasi Dokumen," *J. Inform. dan Multimed.*, vol. 16, no. 2, pp. 20–26, 2024, doi: 10.33795/jtim.v16i2.6599.

[7] F. F. Roji, R. Setiawan, R. Gusdiana, M. R. Cahyadiputra, and W. H. Hamdi, "Implementasi Tanda Tangan Digital pada Pembuatan Surat Keterangan dengan Metodologi Scrum," *J. Algoritm.*, vol. 20, no. 1, pp. 199–210, 2023.

[8] M. Halim, Sukiman, and O. Pribadi, "PENERAPAN QRCODE SEBAGAI TANDA TANGAN DIGITAL DALAM PENERBITAN SURAT KELUARPADA STMIK METHODIST BINJAI," *Technol. Informatics Comput. Syst.*, vol. 13, no. 2, pp. 261–268, 2024.

[9] T. S. P. Supriadi, Y. Syahidin, and Y. Yunengsih, "Implementation of Digital Signatures in the Integrated Patient Progress Notes System at XYZ Hospital Bandung," *Int. J. Softw. Eng. Comput. Sci.*, vol. 4, no. 2, pp. 836–849, 2024, doi: 10.35870/ijsecs.v4i2.2936.

[10] B. P. Kavin and S. Ganapathy, "A New Digital Signature Algorithm for

Ensuring the Data Integrity in Cloud using Elliptic Curves," *Int. Arab J. Inf. Technol.*, vol. 18, no. 2, pp. 180–190, 2021, doi: 10.34028/IAJIT/18/2/6.

[11] T. Wellem, Y. Nataliani, and A. Iriani, "Academic Document Authentication using *Elliptic Curve Digital Signature Algorithm* and QR Code," *Int. J. Informatics Vis.*, vol. 6, no. 3, pp. 667–675, 2022, doi: 10.30630/joiv.6.2.872.

[12] M. K. Sharma and I. Khan, "Blake2B Algorithm : Ensuring Robust Data Security - A Comprehensive Review," *J. Emerg. Technol. Innov. Res.*, vol. 10, no. 12, pp. 768–777, 2023.

[13] P. K. Yien, K. Malik, and S. N. Ramli, "Comparative Study on Hash Function Algorithms for Blockchain Technology," *Appl. Inf. Technol. Comput. Sci.*, vol. 5, no. 1, pp. 16–33, 2024, [Online]. Available: https://doi.org/10.30880/aitcs.2024.05.01.002

[14] T. Abdurrachman and B. R. Suteja, "Pengembangan Sistem Informasi Asosiasi Jasa Konstruksi dengan Menerapkan Tanda Tangan Digital," *J. Tek. Inform. dan Sist. Inf.*, vol. 7, no. 1, pp. 261–273, 2021, doi: 10.28932/jutisi.v7i1.3431.

[15] M. Taufiqurrahman, Irawan, and I. Syamsuddin, "Perancangan Sistem Tanda Tangan Digital (Digital Signature)," *Pros. Semin. Nas. Tek. Elektro dan Inform.*, pp. 60–65, 2020, [Online]. Available: https://jurnal.poliupg.ac.id/index.php/sntei/article/view/2178

[16] D. Pittner, "Design and Hardware Implementation of an Elliptic Curve Cryptography," 2022.

[17] M. U. Noor, "Tanda Tangan Digital: Otoritas pada Arsip Elektronik," *JIPI (Jurnal Ilmu Perpust. dan Informasi)*, vol. 6, no. 1, pp. 17–26, 2021, doi: 10.30829/jipi.v6i1.8165.

[18] Z. Arif and A. Nurokhman, "Analisis Perbandingan Algoritma Kriptografi Simetris Dan Asimetris Dalam Meningkatkan Keamanan Sistem Informasi," J. Teknol. Sist. Inf., vol. 4, no. 2, pp. 394–405, 2023, doi: 10.35957/jtsi.v4i2.6077.

[19] M. M. Ulla and D. S. Sakkari, "Research on Elliptic Curve Crypto System with Bitcoin Curves - SECP256k1, NIST256p, NIST521p and LLL," *J.*

Cyber Secur. Mobil., vol. 12, no. 1, pp. 103–128, 2023, doi: 10.13052/jcsm2245-1439.1215.

[20] Isnaini, R. A. Siregar, and N. Hidayat, "Implementasi Algoritme BLAKE2B Pada JSON Web Token Untuk Mekanisme Autentikasi Query Language," *J. Pengemb. Teknol. Inf. dan Ilmu Komput.*, vol. 5, no. 1, pp. 88–96, 2021, [Online]. Available: http://j-ptiik.ub.ac.id

[21] A. M. Fajrin and F. Baharuddin, "Analisis Performa Algoritma BLAKE2b dan SHA-256 pada Implementasi Blockchain," *J. Penerapan Sist. Inf. (Komputer Manajemen)*, vol. 6, no. 2, pp. 451–460, 2025.

[22] A. Nadzifarin and A. Asmunin, "Penerapan *Elliptic Curve Digital Signature Algorithm* pada Tanda Tangan Digital dengan Studi Kasus Dokumen Surat – Menyurat," *J. Informatics Comput. Sci.*, vol. 4, no. 01, pp. 1–9, 2022, doi: 10.26740/jinacs.v4n01.p1-9.

[23] A. Asiking, A. H. N, and I. S. K. Idris, "Quick Response Code Absensi Guru Menggunakan Secure Hashing Algorithm (SHA)," *J. Tecnoscienza*, vol. 6, no. 2, pp. 332–346, 2022, doi: 10.51158/tecnoscienza.v6i2.705.

[24] R. Pamungkas and F. W. Z. Zaney, "Penerapan Hashing SHA1 dan Algoritma Asimetris RSA untuk Keamanan Data pada Sistem Informasi berbasis Web," *J. Comput. Inf. Syst. Technol. Manag.*, vol. 4, no. 1, pp. 84–89, 2021, doi: 10.25273/research.v4i1.9099.

[25] A. Sideris, T. Sanida, and M. Dasygenis, "Hardware acceleration design of the SHA-3 for high throughput and low area on FPGA," *J. Cryptogr. Eng.*, vol. 14, pp. 193–205, 2024, doi: 10.1007/s13389-023-00334-0.

[26] I. P. Pujiono, R. B. Trianto, and F. M. Hana, "Perbandingan Efisiensi Memori dan Waktu Komputasi Pada 7 Algoritma Sorting Menggunakan Bahasa Pemrograman Java," *Simkom*, vol. 9, no. 2, pp. 218–230, 2024, doi: 10.51717/simkom.v9i2.481.

[27] L. Fitria, . N., and F. Amri, "Implementasi Algoritma Shortest Job First (SJF) Pada Sistem Pembelian Menu Makanan Dan Minuman di Warkop Geidar," *J. Ilm. Ilk. - Ilmu Komput. Inform.*, vol. 8, no. 1, pp. 113–125, 2025, doi: 10.47324/ilkominfo.v8i1.322.

[28] N. A. Fitriani, A. Aminuddin, and S. Arifianto, "Perbandingan Kinerja

Algoritma *Elliptic Curve Digital Signature Algorithm* (ECDSA) Menggunakan Fungsi Hash Secure Hash Algorithm (SHA-1) dan Keccak pada Tanda Tangan Digital," *J. Repos.*, vol. 3, no. 3, pp. 331–342, 2024, doi: 10.22219/repositor.v3i3.31071.

[29] F. A. limara, Y. H. Amaliawati, A. A. R. P. Pratama, and I. A. Saputro, "Analisis Perbandingan Kinerja Algoritma Kriptografi Message Digest Algorithm 5 (MD5) dan Digital Signature Algorithm (DSA) Berdasarkan Ukuran File dalam Proses Enkripsi File," *Pros. Semin. Nas. Amikom Surakarta*, vol. 2, no. November 2024, pp. 1176–1186, 2024, [Online]. Available: https://ojs.amikomsolo.ac.id/index.php/semnasa/article/view/523

[30] N. A. Karima, A. N. Aisyah, H. V. Silla, L. B. Handoko, and R. R. Sani, "Kriptografi Teks Berbasis Algoritma Substitusi Vigenere Cipher 8 Bit," *J. Masy. Inform.*, vol. 15, no. 1, pp. 1–13, 2024, doi: 10.14710/jmasif.15.1.60836.

[31] W. Prabowo and A. Nizirwan, "Pengujian Model Simulasi Efek Avalanche Kriptografi Simetris Algoritma AES 128-bit, Mode ECB dan CBC," *J. ikraith-infromatika*, vol. 9, no. 1, pp. 178–186, 2025.

[32] D. Upadhyay, N. Gaikwad, M. Zaman, and S. Sampalli, "Investigating the *Avalanche Effect* of Various Cryptographically Secure Hash Functions and Hash-Based Applications," *IEEE Access*, vol. 10, no. August, pp. 112472–112486, 2022, doi: 10.1109/ACCESS.2022.3215778.

[33] N. Zulkarnaim and M. F. Mansyur, "Penerapan Spiral Method untuk Pengembangan Sistem Pencegahan Pemalsuan Sertifikat dengan Penerapan Tanda Tangan Digital dan Verifikasi Online," *J. Teknol. Sist. Inf. dan Apl.*, vol. 7, no. 1, pp. 90–96, 2024, doi: 10.32493/jtsi.v7i1.36905.

[35] J. S. G. Sinaga, Nehemia Sitorus, and Steven Lukas Samosir, "Analisis Kinerja Algoritma Hash pada Keamanan Data: Perbandingan Antara SHA-256, SHA-3, dan Blake2," *J. Quancom Quantum Comput. J.*, vol. 2, no. 2, pp. 9–16, 2024, doi: 10.62375/jqc.v2i2.432.

[36] N. S. Guna, A. Rahmatulloh, and A. N. Rachman, "Implementasi Json Parsing Untuk Pertukaran Data Pada Aplikasi Vpn Client Berbasis Mobile," *Netw. Eng. Res. Oper.*, vol. 8, no. 1, pp. 65–76, 2023, doi: 10.21107.