

BAB VII. KESIMPULAN

Krisis dan bencana identitas bangsa Indonesia ditentukan dari seberapa besar nilai budaya dan keluhuran bangsa dapat terjaga dengan baik. Nilai-nilai ini tercermin dalam peninggalan budaya dan peradaban setiap generasinya yang mampu diteruskan sebagai nilai bagi generasi selanjutnya. Bangsa Indonesia dahulu dikenal sebagai sebuah bangsa nusantara yang memiliki kebesaran peradaban yang agung dan menguasai wilayah yang luas. Banyak peninggalan sejarah yang tersebar di seluruh wilayah nusantara dan saat ini mulai terungkap satu persatu merajut sejarah peradaban di bumi nusantara ini. Balai Arkeologi (Balar) daerah berperan dalam riset penemuan artefak, ekofak, dan fitur yang di kelola di museum ataupun dalam konservasi situs setempat. Namun secara strategis kebijakan dalam pembangunan ekosistem digital bidang arkeologi perlu andil Pusat Penelitian Arkeologi Nasional (Arkenas) sebagai sentral utama yang menjadi pusat segala kebijakan dan anggaran yang langsung terdistribusi di masing-masing Balar.

Balar sebagai perpanjangan tangan Arkenas di daerah kemudian akan membentuk konsorsium-konsorsium atau bekerja sama dengan komunitas budaya setempat untuk melakukan kegiatan lapangan terkait pelestarian data arkeologi dan budaya secara digital dengan menerapkan teknik yang sesuai berdasarkan produk budaya yang diteliti. Semua hasil akan tersimpan dalam basis data pusat yang dikelola oleh Arkenas dan menjadi bank data arkeologi yang mampu di ekstraksi sebagai bahan penelitian ataupun visualisasi yang dipakai sebagai produk sosialisasi temuan arkeologi ke masyarakat.

Posisi penelitian ini menjadi strategis dalam penentuan keberhasilan penerapan ekosistem data digital, sehingga jika program sains data ini sudah menjadi rencana strategis di Arkenas, niscaya identitas bangsa Indonesia melalui kegiatan konservasi budaya dan arkeologi secara digital dapat terbangun dan membentuk ciri khas Indonesia di dunia internasional.

DAFTAR PUSTAKA

- [1] S. Riyanto, *Situs Liyangan dan Sejarahnya: Peradaban Adiluhung di Lereng Gunung*. Yogyakarta: Balai Arkeologi Provinsi Daerah Istimewa Yogyakarta, 2020.
- [2] B. R. Prathap, A. K. Sujatha, C. B. S. Yadav, and M. Mounika, "Polarity detection on real-time news data using opinion mining," *Adv. Parallel Comput.*, vol. 37, pp. 90–97, 2020, doi: 10.3233/APC200124.
- [3] M. Szymkowiak, T. Klimanek, and T. Józefowski, "Applying Market Basket Analysis To Official Statistical Data," *Econometrics*, vol. 22, no. 1, pp. 39–57, 2018, doi: 10.15611/eada.2018.1.03.
- [4] O. Nagornyy and O. Koltsova, "Mining Media Topics Perceived as Social Problems by Online Audiences: Use of a Data Mining Approach in Sociology," *SSRN Electron. J.*, 2018, doi: 10.2139/ssrn.2968359.
- [5] A. Tonazzini *et al.*, "Analytical and mathematical methods for revealing hidden details in ancient manuscripts and paintings: A review," *J. Adv. Res.*, vol. 17, pp. 31–42, 2019, doi: 10.1016/j.jare.2019.01.003.
- [6] L. Gomes, O. Regina Pereira Bellon, and L. Silva, "3D reconstruction methods for digital preservation of cultural heritage: A survey," *Pattern Recognit. Lett.*, vol. 50, 2014, doi: 10.1016/j.patrec.2014.03.023.
- [7] I. Aicardi, F. Chiabrando, A. Maria Lingua, and F. Noardo, "Recent trends in cultural heritage 3D survey: The photogrammetric computer vision approach," *J. Cult. Herit.*, vol. 32, pp. 257–266, 2018, doi: 10.1016/j.culher.2017.11.006.
- [8] L. Bezzi *et al.*, "Commercial Archaeology and 3D Web Technologies," *J. F. Archaeol.*, vol. 43, no. sup1, pp. S45–S59, 2018, doi: 10.1080/00934690.2018.1505410.
- [9] UNESCO, "Records of The General Conference of UNESCO," 2004. doi: 10.3917/presa.109.0161.
- [10] E. Gardiner and R. G. Musto, *The digital humanities : a primer for students and scholars*. 2015.
- [11] J. Youtie, A. L. Porter, and Y. Huang, "Early social science research about Big Data," *Sci. Public Policy*, vol. 44, no. 1, pp. 65–74, 2017, doi: 10.1093/scipol/scw021.
- [12] R. Kitchin, "Big Data, new epistemologies and paradigm shifts," *Big Data*

- Soc.*, vol. 1, no. 1, pp. 1–12, 2014, doi: 10.1177/2053951714528481.
- [13] C. Reiff, S. Oechsle, F. Eger, and A. Verl, “Web-based Platform for Data Analysis and Monitoring,” *Procedia CIRP*, vol. 86, pp. 31–36, 2020, doi: 10.1016/j.procir.2020.01.009.
- [14] G. Saranya, N. Gopinath, G. Geetha, K. Meenakshi, and M. Nithya, “Prediction of Customer Purchase Intention Using Linear Support Vector Machine in Digital Marketing,” *J. Phys. Conf. Ser.*, vol. 1712, no. 1, 2020, doi: 10.1088/1742-6596/1712/1/012024.
- [15] S. A. Macskassy and F. Provost, “Classification in Networked Data: A Toolkit and a Univariate Case Study Sofus,” *J. Mach. Learn. Res.*, vol. 8, no. 1, pp. 935–983, 2007, doi: 10.1021/jf901618z.
- [16] R. Goldstone, “An efficient method for obtaining similarity data,” *Behav. Res. Methods, Instruments, Comput.*, vol. 26, no. 4, pp. 381–386, 1994, doi: 10.3758/BF03204653.
- [17] B. M. Mathisen, A. Aamodt, K. Bach, and H. Langseth, “Learning similarity measures from data,” *Prog. Artif. Intell.*, vol. 9, no. 2, pp. 129–143, 2020, doi: 10.1007/s13748-019-00201-2.
- [18] R. Wan, N. Xiong, Q. Hu, H. Wang, and J. Shang, “Similarity-aware data aggregation using fuzzy c-means approach for wireless sensor networks,” *Eurasip J. Wirel. Commun. Netw.*, vol. 2019, no. 1, 2019, doi: 10.1186/s13638-019-1374-8.
- [19] Z. Chen, J. Song, and Y. Yang, “Similarity measurement of metadata of geospatial data: An artificial neural network approach,” *ISPRS Int. J. Geo-Information*, vol. 7, no. 3, 2018, doi: 10.3390/ijgi7030090.
- [20] S. Ahmad and R. Varma, “Information extraction from text messages using data mining techniques,” *Malaya J. Mat.*, vol. 5, no. 1, pp. 26–29, 2018, doi: 10.26637/mjm0s01/05.
- [21] G. B. Demisse *et al.*, “Information mining from heterogeneous data sources: A case study on drought predictions,” *Inf.*, vol. 8, no. 3, 2017, doi: 10.3390/info8030079.
- [22] P. P. A. Nasional, *Rencana Strategis Pusat Penelitian Arkeologi Nasional 2020-2024*. Jakarta: Kementerian Pendidikan dan Kebudayaan, 2020.
- [23] R. Opitz, M. Mogetta, and N. Terrenato, *A Mid-Republican House from Gabii*. Ann Arbor: University of Michigan Press, 2018.
- [24] D. Beel, C. Wallace, G. Webster, and H. Nguyen, “The Geographies of Community History Digital Archives in Rural Scotland,” *Scottish Geogr.*

- J.*, vol. 131, no. 3–4, pp. 201–211, 2015, doi: 10.1080/14702541.2014.980839.
- [25] D. E. Beel *et al.*, “Cultural resilience: The production of rural community heritage, digital archives and the role of volunteers,” *J. Rural Stud.*, vol. 54, pp. 459–468, 2017, doi: 10.1016/j.jrurstud.2015.05.002.
- [26] G. Alberts, M. Went, and R. Jansma, “Archaeology of the Amsterdam digital city; why digital data are dynamic and should be treated accordingly,” *Internet Hist.*, vol. 1, no. 1–2, pp. 146–159, 2017, doi: 10.1080/24701475.2017.1309852.
- [27] W. Xiao, J. Mills, G. Guidi, P. Rodríguez-Gonzálvez, S. Gonizzi Barsanti, and D. González-Aguilera, “Geoinformatics for the conservation and promotion of cultural heritage in support of the UN Sustainable Development Goals,” *ISPRS J. Photogramm. Remote Sens.*, vol. 142, pp. 389–406, 2018, doi: 10.1016/j.isprsjprs.2018.01.001.
- [28] G. Landeschi, “Rethinking GIS, three-dimensionality and space perception in archaeology,” *World Archaeol.*, vol. 51, no. 1, pp. 17–32, 2019, doi: 10.1080/00438243.2018.1463171.
- [29] J. Pillai, *Cultural Mapping : A Guide to Understanding Place, Community and Continuity*. Petaling Jaya: Strategic Information and Research Development Centre, 2013.
- [30] M. Di Stefano, P. Salonia, and C. Ventura, “Mapping and Digitizing Heritage Sites: ROVINA Project for Programmed Conservation,” *Procedia - Soc. Behav. Sci.*, vol. 223, pp. 944–951, 2016, doi: 10.1016/j.sbspro.2016.05.325.
- [31] L. Stapleton, B. O’Neill, K. Cronin, P. McLnerney, M. Hendrick, and E. Dalton, “A Semi-Automated Systems Architecture for Cultural Heritage, Sustainable Solutions for Digitising Cultural Heritage,” *IFAC-PapersOnLine*, vol. 52, no. 25, pp. 562–567, 2019, doi: 10.1016/j.ifacol.2019.12.606.
- [32] M. S. A. Rashid, “Understanding the Past for a Sustainable Future: Cultural Mapping of Malay Heritage,” *Procedia - Soc. Behav. Sci.*, vol. 170, pp. 10–17, 2015, doi: 10.1016/j.sbspro.2015.01.007.
- [33] H. Hanan, D. Suwardhi, T. Nurhasanah, and E. S. Bukit, “Batak Toba Cultural Heritage and Close-range Photogrammetry,” *Procedia - Soc. Behav. Sci.*, vol. 184, no. August 2014, pp. 187–195, 2015, doi: 10.1016/j.sbspro.2015.05.079.
- [34] R. Napolitano *et al.*, “Tool development for digital reconstruction: A