

## DAFTAR PUSTAKA

- Akhtar, N., & Ghafoor, S. (2021). Analysis of Architectural Patterns for Android Development. Conference: Analysis of Architectural Patterns for Android Development-SDA, 1(1), 1-8.
- Alkandari, M.A., Kelkawi, A., & Elish, M.O. (2021). An Empirical Investigation on The Effect of Code Smells on Resource Usage of Android Mobile Applications. IEEE Access, vol. 9, pp. 61853-61863. IEEE. <https://doi.org/10.1109/ACCESS.2021.3075040>
- Anderson, C. (2012). The model-view-viewmodel (mvvm) design pattern. In Pro Business Applications with Silverlight 5 (pp. 461-499). Berkeley, CA: Apress.
- Arni, R., & Suciaty, P. (2021). An Analysis of Students' Hiragana Letters Mastery at Japanese For General Purpose Course of Universitas Negeri Padang. 2nd Progress in Social Science, Humanities and Education Research Symposium (PSSHRS 2020), 24-29. Atlantis Press. <https://doi.org/10.2991/assehr.k.210618.005>.
- Arponen, O. (2023). Software architectural patterns and principles in Android development.
- Borque, P., & Fairley, R. (2014). Guide to the software engineering body of knowledge version 3.0. IEEE Computer Society Staff.
- Bose, S., Mukherjee, M., Kundu, A., & Banerjee, M. (2018). A comparative study: java vs kotlin programming in android application development. International Journal of Advanced Research in Computer Science, 9(3), 41-45.
- Chakraborty, S., & Aithal, P. S. (2023). MVVM Demonstration Using C# WPF. International Journal of Applied Engineering and Management Letters (IJAEML), 7(1), 1-14.
- Daoudi, A., ElBoussaidi, G., Moha, N., & Kpodjedo, S. (2019). An exploratory study of mvc-based architectural patterns in android apps. Proceedings of the 34th ACM/SIGAPP Symposium on Applied Computing, 1711-1720. <https://doi.org/10.1145/3297280.3297447>.
- Ejiyi, C. J., Deng, J., Ejiyi, T. U., Salako, A. A., Ejiyi, M. B., & Anomihe, C. G. (2021). Design and Development of Android Application for Educational Institutes. Journal of Physics: Conference Series (Vol. 1769, No. 1, p. 012066). IOP Publishing.
- Epiloksa, H. A., Kusumo, D. S., & Adrian, M. (2022). Effect of MVVM Architecture Pattern on Android Based Application Performance. JURNAL MEDIA INFORMATIKA BUDIDARMA, 6(4), 1949-1955.
- Ferracaku, J. (2021). The state of micro frontends: challenges of applying and adopting client-side microservices (Master's thesis, J. Ferracaku).
- Fletcher-Flinn, C. M., Thompson, G. B., Yamada, M., & Naka, M. (2011). The acquisition of phoneme awareness in children learning the hiragana syllabary. Reading and Writing, 24, 623-633.

- Gakis, S., & Everlönn, N. (2020). Java and Kotlin, a performance comparison.
- Góis Mateus, B., & Martinez, M. (2019). An empirical study on quality of Android applications written in Kotlin language. *Empirical Software Engineering*, 24, 3356-3393.
- Gotseva, D., Tomov, Y., & Danov, P. (2019). Comparative study java vs kotlin. In 2019 27th National Conference with International Participation (TELECOM) (pp. 86-89). IEEE.
- Hannula, E. (2022). Developing a mobile application for property maintenance: case Pyhä-Luosto Matkailu Oy.
- Hardani, H., Andriani, H., Ustiawaty, J., & Utami, E. F. (2020). Metode penelitian kualitatif & kuantitatif.
- Hasanah, F. N., & Untari, R. S. (2020). Buku Ajar Rekayasa Perangkat Lunak. Umsida Press, 1-119.
- Indrawan, D., Kusumo, D. S., & Puspitasari, S. Y. (2023). ANALYSIS OF THE IMPLEMENTATION OF MVVM ARCHITECTURE PATTERN ON PERFORMANCE OF IOS MOBILE-BASED APPLICATIONS. *JUPI (Jurnal Ilmiah Penelitian dan Pembelajaran Informatika)*, 8(1), 59-65. <https://doi.org/10.29100/jipi.v8i1.3293>.
- Inoue, T., Georgiou, G. K., Muroya, N., Maekawa, H., & Parrila, R. (2017). Cognitive predictors of literacy acquisition in syllabic Hiragana and morphographic Kanji. *Reading and Writing*, 30, 1335-1360.
- Jaiswal, M. (2018). Android the Mobile Operating System and Architecture. *International Journal of Creative Research Thoughts (IJCRT)*, ISSN, 2320-2882.
- Jarzabek, S., Poniszewska-Marańda, A., & Madeyski, L. (Eds.). (2020). *Integrating Research and Practice in Software Engineering*. Springer.
- Jha, A. K., Lee, S., & Lee, W. J. (2019). Characterizing Android-specific crash bugs. 2019 IEEE/ACM 6th International Conference on Mobile Software Engineering and Systems (MOBILESoft) (pp. 111-122). IEEE.
- Kacetl, J., & Klímová, B. (2019). Use of smartphone applications in english language learning—A challenge for foreign language education. *Education Sciences*, 9(3), 179. <https://doi.org/10.3390/educsci9030179>
- Kirthika, B. D., Prabhu, S., & Visalakshi, S. (2015). Android operating system: a review. *International Journal of Trend in Research and Development*, 2(5), 260-264.
- Kusrini, D., Dewanty, V. L., Putri, A., & Putri, R. A. (2021). Development of Comic Books as Teaching Media for Japanese Language Learners in Indonesian High Schools. Fifth International Conference on Language, Literature, Culture, and Education (ICOLLITE 2021), 199-204. Atlantis Press. <https://doi.org/10.2991/assehr.k.211119.031>

- Lou, T. (2016). A comparison of Android native app architecture MVC, MVP and MVVM. Eindhoven University of Technology.
- Machali, I. (2021). Metode penelitian kuantitatif (panduan praktis merencanakan, melaksanakan, dan analisis dalam penelitian kuantitatif).
- Magics-Verkman, H., Zmaranda, D. R., Györödi, C. A., & Györödi, R. Ş. (2023). A Comparison of Architectural Patterns for Testability and Performance Quality for iOS Mobile Applications Development. 2023 17th International Conference on Engineering of Modern Electric Systems (EMES) (pp. 1-4). IEEE.
- Maharjan, B. (2018). Puzzle game using Android MVVM Architecture.
- Mateus, B. G., & Martinez, M. (2020). On the adoption, usage and evolution of Kotlin features in Android development. Proceedings of the 14th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM) (pp. 1-12).
- Maulana, F., Afyenni, R., & Erianda, A. (2022). Aplikasi Manajemen Laboratorium Menggunakan Metode MVVM Berbasis Android. JITSI: Jurnal Ilmiah Teknologi Sistem Informasi, 3(3), 88-93.
- Murphy, Mark. (2009). Beginning Android. 10.1007/978-1-4302-2420-4.
- Nam, D., Horvath, A., Macvean, A., Myers, B., & Vasilescu, B. (2019). Marble: Mining for boilerplate code to identify API usability problems. In 2019 34th IEEE/ACM International Conference on Automated Software Engineering (ASE) (pp. 615-627). IEEE.
- Neves, C., Lin, C., Nigam, S., Patapas, D., Eguiluz, A., Islam, T., & Malavolta, I. (2023). A study on the energy consumption and performance of single-activity android apps. 2023 IEEE/ACM 7th International Workshop on Green and Sustainable Software (GREENS) (pp. 9-16). IEEE.
- Nurcholis, R., Purnamasari, A. I., Dikananda, A. R., Nurdiawan, O., & Anwar, S. (2021). Game Edukasi Pengenalan Huruf Hiragana Untuk Meningkatkan Kemampuan Berbahasa Jepang. Building of Informatics, Technology and Science (BITS), 3(3), 338-345.
- Perez, J., & Quereda, J. M. I. (2020). Recognition of Japanese handwritten characters with Machine learning techniques. Bachelor's degree in Multimedia Engineering. Escuela Politécnica Superior, Alicante.
- Pölkki, P. (2023). Renewing Elisa Viihde with the latest Android practices.
- Putranto, B. P. D., Saptoto, R., Jakaria, O. C., & Andriyani, W. (2020). A Comparative Study of Java and Kotlin for Android Mobile Application Development. 2020 3rd International Seminar on Research of Information Technology and Intelligent Systems (ISRITI) (pp. 383-388). IEEE.
- Ragkhitwetsagul, C., Krinke, J., & Clark, D. (2018). A comparison of code similarity analysers. Empirical Software Engineering, 23, 2464-2519.

- Rahmah, Y., & Rini, E. I. H. A. N. (2020). PENGENALAN PLATFORM MINATO SEBAGAI MEDIA PEMBELAJARAN HURUF DAN KOSAKATA BAHASA JEPANG. *Harmoni: Jurnal Pengabdian Kepada Masyarakat*, 6(2), 253-259.
- Sabiyath Fatima, N., Steffy, D., Stella, D., & Nandhini Devi, S. (2020). Enhanced Performance of Android Application Using RecyclerView. *Advanced Computing and Intelligent Engineering: Proceedings of ICACIE 2018, Volume 2* (pp. 189-199). Singapore: Springer Singapore.
- Septiana, Y., Mulyani, A., Kurniadi, D., & Hasanudin, H. (2021). Handwritten recognition of Hiragana and Katakana characters based on template matching algorithm. *Conference Series: Materials Science and Engineering* (Vol. 1098, No. 3, p. 032093). IOP Publishing. <https://doi.org/10.1088/1757-899X/1098/3/032093>
- Shamon, M., & Mohamad, R. (2022). Kana Warrior: Teaching Hiragana to Malaysian Youth Using 2d Platformer Video Game. *Journal of Computing Technologies and Creative Content (JTec)*, 7(2), 1-7.
- Sheikh, W., & Sheikh, N. (2020). Audiometry: A model-view-ViewModel (MVVM) application framework for hearing impairment diagnosis. *Journal of Open Source Software*, 5(51), 2016, 1-6.
- Sholichin, F., Adham Bin Isa, M., Abd Halim, S., Firdaus Bin Harun, M. (2019). Review of iOS Architectural Pattern for Testability, Modifiability, and Performance Quality. *Journal of Theoretical and Applied Information Technology*, 97 (15).
- Sibarani, N. S., Munawar, G., & Wisnuadhi, B. (2018). Analisis Performa Aplikasi Android Pada Bahasa Pemrograman Java dan Kotlin. *Prosiding Industrial Research Workshop and National Seminar. Ind. Res. Work. Natl. Semin.*
- Sideris, C. (2023). Accommodation management software (Master's thesis, Πανεπιστήμιο Πειραιώς).
- Sommerville, I. (2016). *Software Engineering* (Vol. 10). Pearson Education Limited, Boston
- Sudjianto. (2021). *Bahasa Jepang Sistem 52M Kursus Mandiri 1 Tahun Untuk Orang Indonesia* (Vol. 1). Jakarta: Kesaint Blanc.
- Suprayitno, H., & Heny, A. (2020). *Mobile Application For Language Learning Systems*.
- Syaifudin, Y. W., Funabiki, N., Kuribayashi, M., & Kao, W. C. (2020). A proposal of Android programming learning assistant system with implementation of basic application learning. *International Journal of Web Information Systems*, 16(1), 115-135.
- Tanji, T., & Inoue, T. (2021). Early prediction of reading development in Japanese hiragana and kanji: a longitudinal study from kindergarten to grade 1. *Reading and Writing*, 1-17.
- Titarmare, N., Krupal, P., Tol, M., Gupta, A., & Kolte, S. (2020). Happy to Help (HTH): An android application and website for helping people to make donations. *IJRAR-*

International Journal of Research and Analytical Reviews (IJRAR), E-ISSN, 2348-1269.

- Wahyuni, M. I., & Sutedi, D. (2020). Error Analysis of Sokuon and Choon Used by Japanese Learners. 3rd International Conference on Language, Literature, Culture, and Education (ICOLLITE 2019) (pp. 11-14). Atlantis Press.
- Widianto, S. R., SBK, F. A., & Purwanto, A. (2020). Analysis of Mobile Based Software Development Model: Systematic Review. *Jurnal Mantik*, 4(3), 1703-1711.
- Wijaya, D. C., Syaifudin, Y. W., Ariyanto, R., Funabiki, N., Ruslan, M. S. F., & Mu'Aasyiqin, I. (2021). An implementation and evaluation of basic data storage topic for content provider stage in Android programming learning assistance system. 2021 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT) (pp. 328-333). IEEE.
- Wilson, A., Wedyan, F., & Omari, S. (2022). An Empirical Evaluation and Comparison of the Impact of MVVM and MVC GUI Driven Application Architectures on Maintainability and Testability. In 2022 International Conference on Intelligent Data Science Technologies and Applications (IDSTA) (pp. 101-108). IEEE.
- Wisnuadhi, B., Munawar, G., & Wahyu, U. (2020). Performance comparison of native android application on mvp and mvvm. *International Seminar of Science and Applied Technology (ISSAT 2020)*, 276-282. Atlantis Press. <https://doi.org/10.2991/aer.k.201221.047>.
- Zakaria, A. H., & Nuryana, I. K. K. D. (2023). Android Software MVVM and MVP Architecture Analysis with iTourism App Case Study. *Journal of Informatics and Computer Science (JINACS)*, 351-357.
- Zarifis, K. (2019). *Facilitating the development of Analytical Dashboards on the Web*. University of California, San Diego.
- Zebo, M. (2022). Why Do We Learn Foreign Language. *O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI*, 1(11), 237-239.