

DAFTAR PUSTAKA

- [1] N. W. P. Ariati, “The Journey of a Goddess: Durga in India, Java and Bali,” pp. 1–392, 2009.
- [2] R. E. Widiyanti and H. Yulianton, “IMPLEMENTASI CHATBOT REKOMENDASI KULINER KOTA SEMARANG DENGAN FRAMEWORK RASA,” *J. GEEJ*, vol. 7, no. 2, pp. 1333–1340, 2020.
- [3] F. S. Khan, M. Al Mushabbir, M. S. Irbaz, and M. A. Al Nasim, “End-to-End Natural Language Understanding Pipeline for Bangla Conversational Agents,” *Proc. - 20th IEEE Int. Conf. Mach. Learn. Appl. ICMLA 2021*, pp. 205–210, 2021, doi: 10.1109/ICMLA52953.2021.00039.
- [4] Z. A. Annisa, R. S. Perdana, and P. P. Adikara, “KOMBINASI INTENT CLASSIFICATION DAN NAMED ENTITY RECOGNITION PADA DATA BERBAHASA INDONESIA DENGAN METODE DUAL INTENT ENTITY RECOGNITION TRANSFORMER,” *J. Teknol. Inf. dan Ilmu Komputer(JTIK)*, vol. 11, no. 5, pp. 1017–1024, 2024, doi: 10.25126/jtiik.2024117985.
- [5] T. Bunk, D. Varshneya, V. Vlasov, and A. Nichol, “DIET: Lightweight Language Understanding for Dialogue Systems,” 2020.
- [6] T. T. Nguyen, A. D. Le, H. T. Hoang, and T. Nguyen, “NEU-chatbot: Chatbot for admission of National Economics University,” *Comput. Educ. Artif. Intell.*, vol. 2, pp. 1–6, 2021, doi: 10.1016/j.caeai.2021.100036.
- [7] Kiran Maharana, “A Review: Data Overfitting and Underfitting Techniques,” *J. Inf. Syst. Eng. Manag.*, vol. 10, no. 13s, pp. 387–405, 2025, doi: 10.52783/jisem.v10i13s.2072.
- [8] L. Anindyati, “Analisis dan Perancangan Aplikasi Chatbot Menggunakan Framework Rasa dan Sistem Informasi Pemeliharaan Aplikasi (Studi Kasus: Chatbot Penerimaan Mahasiswa Baru Politeknik Astra),” *J. Teknol. Inf. dan Ilmu Komput.*, vol. 10, no. 2, pp. 291–300, 2023, doi: 10.25126/jtiik.20231026409.
- [9] T. L. M. Suryanto and A. P. Wibawa, “QA Durga (Membaca Durga),” 2024, *Mendeley Data*. doi: 10.17632/3c3gpfxpg.1.
- [10] W. Astuti, A. P. Wibawa, H. Haviluddin, and H. Darwis, “DIET Classifier

- Model Analysis for Words Prediction in Academic Chatbot,” *Ilk. J. Ilm.*, vol. 16, no. 1, pp. 59–67, 2024, doi: 10.33096/ilkom.v16i1.1598.59-67.
- [11] I. W. Suwena, “Makna Mitos Dewi Saraswati dan Mitos Dewi Durga : Suatu Analisis Struktural,” *Sunari Penjor*, vol. 2, no. 1, pp. 58–73, 2018, doi: 10.24843/SP.2018.v2.i01.p05.
- [12] V. Thangarajah, “PYTHON CURRENT TREND APPLICATIONS- AN OVERVIEW,” *Int. J. Adv. Eng. Res. Dev.*, vol. 6, no. 10, pp. 6–12, 2019.
- [13] Python Software Foundation, “Changelog Python,” Python. [Online]. Available: <https://docs.python.org/release/3.13.1/whatsnew/changelog.html#>
- [14] I. Anaconda, “Miniconda documentation,” Anaconda. [Online]. Available: <https://docs.anaconda.com/miniconda/>
- [15] C. R. Harris *et al.*, “Array programming with NumPy,” *Nature*, vol. 585, no. 7825, pp. 357–362, 2020, doi: 10.1038/s41586-020-2649-2.
- [16] Numpy, “NumPy News.” [Online]. Available: <https://numpy.org/news/>
- [17] N. Yusliani, R. Primartha, and M. Diana, “Multiprocessing Stemming: A Case Study of Indonesian Stemming,” *Int. J. Comput. Appl.*, vol. 182, no. 40, pp. 15–19, 2019, doi: 10.5120/ijca2019918476.
- [18] C. W. Okonkwo and A. Ade-Ibijola, “Chatbots applications in education: A systematic review,” *Comput. Educ. Artif. Intell.*, vol. 2, p. 100033, 2021, doi: 10.1016/j.caeai.2021.100033.
- [19] M. R. Sholahuddin and F. Atqiya, “Sistem Tanya Jawab Konsultasi Shalat Berbasis RASA Natural Language Understanding (NLU),” *J. Pendidik. Multimed.*, vol. 3, no. 2, pp. 93–102, 2021, doi: 10.17509/edsence.v3i2.38732.
- [20] R. Verolina, S. Lestari, M. S. Utomo, U. S. Semarang, and J. Tengah, “Implementasi Chatbot Untuk Membantu Wisatawan Dalam Mencari Wisata Yang Berada Di Kabupaten Semarang Dengan Menggunakan Metode Natural Language Processing (NLP),” *J. Ris. Sist. Inf. Dan Tek. Inform.*, vol. 9, no. 2, pp. 808–817, 2024.
- [21] R. P. Oktavianita, F. A. Sutanto, and U. S. Semarang, “Rekomendasi Pemilihan Hotel Berbasis Chatbot dengan Framework Rasa Dengan Metode

- Natural Language Processing (NLP),” *J. Ris. Sist. Inf. Dan Tek. Inform.*, vol. 9, no. 2, pp. 634–641, 2024.
- [22] S. Raj, *Building Chatbots with Python*. 2019. doi: 10.1007/978-1-4842-4096-0.
- [23] A. Christoper Sebayang, I. Lucia Kharisma, A. Sujjada, and F. Teknik Komputer dan Desain, “Implementasi Chatbot dengan pendekatan Natural Language Processing dan Naïve Bayes dalam meningkatkan layanan perusahaan,” *J. Penerapan Sist. Inf. (Komputer Manajemen)*, vol. 5, no. 3, pp. 1157–1164, 2024.
- [24] I. N. Hidayat, D. Christanto, A. N. Rifai, and M. B. Ulum, “IMPLEMENTASI RASA FRAMEWORK PADA CHATBOT LAYANAN AKADEMIK,” *KOMPUTA J. Ilm. Komput. dan Inform.*, vol. 13, no. 2, pp. 79–90, 2024.
- [25] A. A. Elsayed *et al.*, “Practical Design and Implementation of Virtual Chatbot Assistants for Bioinformatics Based on a NLU Open Framework,” *Big Data Cogn. Comput.*, vol. 8, no. 11, pp. 1–16, 2024, doi: 10.3390/bdcc8110163.
- [26] Y. Windiatmoko, R. Rahmadi, and A. F. Hidayatullah, “Developing Facebook Chatbot Based on Deep Learning Using RASA Framework for University Enquiries,” *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 1077, no. 1, p. 012060, 2021, doi: 10.1088/1757-899x/1077/1/012060.
- [27] A. De Guzman, “Components CountvectorsFeaturizer,” rasa.com. Accessed: Nov. 30, 2024. [Online]. Available: <https://rasa.com/docs/rasa/components#countvectorsfeaturizer>
- [28] A. De Guzman, “Components FallbackClassifier,” rasa.com. Accessed: Nov. 30, 2024. [Online]. Available: <https://rasa.com/docs/rasa/components/#fallbackclassifier>
- [29] D. Normawati and S. A. Prayogi, “Implementasi Naïve Bayes Classifier Dan Confusion Matrix Pada Analisis Sentimen Berbasis Teks Pada Twitter,” *J. Sains Komput. Inform. (J-SAKTI)*, vol. 5, no. 2, pp. 697–711, 2021.
- [30] S. N. Aruriansyah, A. Cherid, H. Santoso, and D. A. Rochmah, “Rancang Bangun Lingkungan Pemrograman Python Dengan Metode Chatbot Pada

- Platform Whatsapp,” *Bit (Fakultas Teknol. Inf. Univ. Budi Luhur)*, vol. 20, no. 2, p. 82, 2023, doi: 10.36080/bit.v20i2.2511.
- [31] Y. A. Singgalen, “Analyzing an Interest in GPT 4o through Sentiment Analysis using CRISP-DM,” *J. Inf. Syst. Informatics*, vol. 6, no. 2, pp. 882–898, 2024, doi: 10.51519/journalisi.v6i2.740.
- [32] E. Adamopoulou and L. Moussiades, *An Overview of Chatbot Technology*, vol. 584 IFIP. Springer International Publishing, 2020. doi: 10.1007/978-3-030-49186-4_31.
- [33] A. Rachman, I. Mardhiyah, and M. Jannah, “Implementasi Chatbot FAQ pada Aplikasi Monev Kinerja Direktorat Jenderal Anggaran Menggunakan Framework Rasa Open Source,” *KLIK Kaji. Ilm. Inform. dan Komput.*, vol. 4, no. 1, pp. 62–72, 2023, doi: 10.30865/klik.v4i1.1020.
- [34] F. Z. Tala, “A Study of Stemming Effects on Information Retrieval in Bahasa Indonesia,” *M.Sc. Thesis, Append. D*, pp. 39–46, 2003.
- [35] Z. H. Pradana, H. Nafi’ah, and R. A. Rochmanto, “Chatbot-based Information Service using RASA Open-Source Framework in Prambanan Temple Tourism Object,” *J. RESTI (Rekayasa Sist. dan Teknol. Informasi)*, vol. 6, no. 4, pp. 656–662, 2022, doi: 10.29207/resti.v6i4.3913.
- [36] N. T. M. Trang and M. Shcherbakov, “Enhancing Rasa Nlu Model for Vietnamese Chatbot,” *Int. J. Open Inf. Technol.*, vol. 9, no. 1, pp. 31–36, 2021.
- [37] M. Vdb, “Policies Rasa,” rasa.com. Accessed: Jun. 29, 2025. [Online]. Available: <https://legacy-docs-oss.rasa.com/docs/rasa/policies/>