

DAFTAR PUSTAKA

- [1] L. Safitri, J. Sahertian, D. W.-G. Journal, and undefined 2023, "Implementasi Algoritma Path Planning A* Pada Base Station Robot Sepak Bola Beroda," *ojs.unpkediri.ac.id*, vol. 7, no. 3, pp. 2580–4952, Accessed: Nov. 27, 2025. [Online]. Available: <https://ojs.unpkediri.ac.id/index.php/gj/article/view/20545>
- [2] N. Putri and Z. Munawar, "Mekanisme umum untuk sistem kecerdasan buatan," *J. Inform.*, vol. 06, no. 02, pp. 58–75, 2019, Accessed: Jan. 25, 2025. [Online]. Available: <https://ejournal.unibba.ac.id/index.php/computing/article/download/206/187>
- [3] D. Hidayat Al-Janan, G. Fadhil Muhammad, and J. Teknik Mesin, "Perancangan Robot Beroda Dengan Sistem Kendali Berbasis Iot Dan Gui Menggunakan Smartphone Android," *pdfs.semanticscholar.org*, pp. 701–711, 2023, doi: 10.21776/jrm.v14i2.1450.
- [4] A. B. Nugroho, "Perancangan tongkat tuna netra menggunakan teknologi sensor ultrasonik untuk membantu kewaspadaan dan mobilitas tuna netra," 2011, Accessed: Jan. 25, 2025. [Online]. Available: <https://digilib.uns.ac.id/dokumen/18151/Perancangan-tongkat-tuna-netra-menggunakan-teknologi-sensor-ultrasonik-untuk-membantu-kewaspadaan-dan-mobilitas-tuna-netra>
- [5] D. B. Prayoga, A. Wiyono, M. Syariffuddien Zuhrie, and L. Rakhmawati, "Sistem Positioning pada Wahana Multicopter Menggunakan Metode Simultaneous Localization and Mapping (SLAM) Berbasis LiDAR dan Inertial Measurement Unit (IMU)," *J. Tek. ELEKTRO*, vol. 13, no. 3, pp. 191–200, Jul. 2024, doi: 10.26740/JTE.V13N3.P191-200.
- [6] W. M. Aries Tadiana, D. Widiatmoko, P. Angkatan Darat, D. Pendem, K. Batu, and J. Timur-Indonesia, "DESIGNING A SMART ROBOT SOLDIER AS A MONITORING AND NEGOTIATION MEDIUM BASED ON ARTIFICIAL INTELLIGENCE: DESIGNING A SMART ROBOT ...," *journal.poltekad.ac.id*, Accessed: Jan. 21, 2026. [Online]. Available: <http://www.journal.poltekad.ac.id/index.php/elka/article/view/521>
- [7] N. Phillip, K. Bintoro, S. P.-J. Integrasi, and undefined 2017, "Review Algoritma C-Theta* Dan Prospek Implementasinya Di Masa Depan," *jurnal.polibatam.ac.id*, vol. 9, no. 2, pp. 129–137, 2017, Accessed: Jan. 22, 2026. [Online]. Available: <https://jurnal.polibatam.ac.id/index.php/JI/article/view/458>
- [8] D. Hermanto, S. D.-J. N. T. Elektro, and undefined 2018, "Penerapan Algoritma A-Star Sebagai Pencari Rute Terpendek pada Robot Hexapod," *jnte.ft.unand.ac.id*, vol. 7, no. 3, pp. 2580–4952, Accessed: Nov. 27, 2025. [Online]. Available: <https://jnte.ft.unand.ac.id/index.php/jnte/article/view/545>
- [9] M. A. Yaqin *et al.*, "Implementasi Path Planning A* Untuk Menghindari Robot lawan Menggunakan Robot Operating System pada KRSBI-Beroda," *jurnal.polinema.ac.id*, vol. 12, no. 1, 2025, doi: 10.33795/elkolind.v12i1/7268.
- [10] F. Nabil, D. Syauqy, E. S.-J. P. Teknologi, and undefined 2022,

- “Pengembangan Sistem Navigasi Robot Beroda menggunakan Lokalisasi berbasis RFID dengan Pathfinding Algoritma A Star pada Simulasi Lingkungan Gudang,” *j-ptiik.ub.ac.id*, vol. 6, no. 11, pp. 5470–5475, 2022, Accessed: Jan. 23, 2026. [Online]. Available: <https://j-ptiik.ub.ac.id/index.php/j-ptiik/article/view/11911>
- [11] E. Gumelar, A. #1, D. E. #2, and A. Fauzi, “Implementasi metode pathfinding dengan algoritma a* pada game rogue-like menggunakan unity,” *socjs.telkomuniversity.ac.id*, doi: 10.34818/indojc.2022.7.3.677.
- [12] H. H. Tang, M. Mailah, & M. Kasim, and A. Jalil, “Perancangan Robot Beroda Dengan Sistem Kendali Berbasis Iot Dan Gui Menggunakan Smartphone Android,” *pdfs.semanticscholar.org*, vol. 44, no. D, pp. 49–64, 2006, Accessed: Jan. 22, 2026. [Online]. Available: <https://pdfs.semanticscholar.org/773d/951c4b182c4ee2e724c6ef8235ec2a58d500.pdf>
- [13] A. Ismail, A. Sheta, M. A.-W.-J. of C. Science, and undefined 2008, “A mobile robot path planning using genetic algorithm in static environment,” *academia.edu*, Accessed: Jan. 22, 2026. [Online]. Available: https://www.academia.edu/download/46604654/A_Mobile_Robot_Path_Planning_Using_Genet20160618-1138-118a5z1.pdf
- [14] E. Sumantri and S. Hidayattullah, “Penerapan Algoritma A* Star Untuk Mencari Rute Terpendek Dari Kemayoran Ke Destinasi Monumen Nasional (MONAS),” *ejournal.sisfokomtek.org*, vol. 5, no. 2, pp. 673–680, doi: 10.55338/saintek.v5i1.1432.
- [15] R. Jaya and I. Artikel, “Implementasi Algoritma A-Star Manhattan Distance untuk Menentukan Jarak Terpendek dalam Sistem Pengantaran Pos di Kecamatan Mariso,” *jurnal.ardenjaya.com* R Jaya Arus J. Sains dan Teknol. 2025 • *jurnal.ardenjaya.com*, vol. 3, no. 2, 2025, Accessed: Jan. 23, 2026. [Online]. Available: <http://www.jurnal.ardenjaya.com/index.php/ajst/article/view/1776>
- [16] D. Hermanto and D. S. Dermawan, “Penerapan Algoritma A-Star Sebagai Pencari Rute Terpendek pada Robot Hexapod,” *J. Nas. Tek. Elektro*, vol. 7, no. 2, pp. 122–129, Jun. 2018, doi: 10.25077/JNTE.V7N2.545.2018.
- [17] I. Bagus, G. Wahyu, and A. Dalem, “Penerapan algoritma A*(Star) menggunakan graph untuk menghitung jarak terpendek,” *ejournal.instiki.ac.id*, vol. 1, no. 1, 2018, Accessed: Jan. 22, 2026. [Online]. Available: <http://ejournal.instiki.ac.id/index.php/jurnalresistor/article/view/253>
- [18] T. Suhendra *et al.*, “Simulasi Kendali Pergerakan Mobile Robot Menggunakan Algoritma A-star dalam Menentukan Jarak Terpendek,” *ojs.umrah.ac.id*, vol. 06, no. 01, pp. 16–23, 2017, Accessed: Jan. 22, 2026. [Online]. Available: <https://ojs.umrah.ac.id/index.php/sustainable/article/view/420>
- [19] Amarudin, M. Adam, U. Hamdan, and A. Hanafi, “Sensor Pendeteksi Halangan Menggunakan Sinar Inframerah,” *Financ. Theory Pract.*, vol. 2, no. 1, pp. 18–29, Feb. 2022, doi: 10.26794/2587-5671-2019-23-5-18-29.
- [20] A. Jayadi, P. A. Pratomo, E. R. Dalimunthe, and D. Redaksi, “Implementasi Algoritma A-Star untuk Perencanaan Jalur Robot Menggunakan Deteksi Warna Berbasis Kamera,” *jurnal.ilmubersama.com*, doi:

- 10.56211/blendsains.v4i1.987.
- [21] D. Putra, S. Kom, M. Kom, H. Amnur, S. Kom, and K. Flomina, "Konsep Dasar Internet Of Things (IoT) dengan Mikrokontroler Esp32," 2025, Accessed: Jan. 21, 2026. [Online]. Available: <https://books.google.com/books?hl=id&lr=&id=c5hQEQAQBAJ&oi=fnd&pg=PA1&dq=jurnal+Beberapa+pin+bahkan+dapat+digunakan+sebagai+touch+sensor,+memberikan+fleksibilitas+dalam+merancang+antarmuka+pengguna.+Dengan+banyaknya+fitur+dan+kemudahan+dalam+pemrograman,+ESP32+sangat+cocok+untuk+proyek+otomasi+rumah,+perangkat+wearable,+dan+berbagai+aplikasi+IoT+lainnya+&ots=r6BpOF1Poh&sig=fWB71EIN3NRFz6ixeyU5RmaDN-w>
 - [22] R. Gurgel, ... W. P.-C. A. U. J., and undefined 2024, "Modelagem e Arquitetura de um Sistema de Irrigação Automática com ESP32, TypeScript e React," *periodicos.uniateneu.edu.br*, Accessed: Jan. 23, 2026. [Online]. Available: <https://periodicos.uniateneu.edu.br/index.php/CyberData/article/view/694>
 - [23] A. Teixeira dos Santos Davi Miguel Machado João Paulo Ferreira Gabi Miguel Puppim Ferreira Thiago Coelho Zério, "Sistema de monitoramento de plantas utilizando o ESP32," *ric.cps.sp.gov.br*, Accessed: Jan. 23, 2026. [Online]. Available: <https://ric.cps.sp.gov.br/handle/123456789/35039>
 - [24] D. Setiawan, A. F. Boy, A. Hafidz, and I. Ishak, "Implementasi teknik pwm pada rancang bangun alat deteksi kecepatan kendaraan berdasarkan perputaran roda berbasis mikrokontroller," *J. SAINTIKOM (Jurnal Sains Manaj. Inform. dan Komputer)*, vol. 19, no. 1, pp. 40–52, Feb. 2020, doi: 10.53513/JIS.V19I1.224.
 - [25] L. Fikriyah, A. R.-J. I. SIMANTIK, and undefined 2018, "Sistem Kontrol Pendingin Ruangan Menggunakan Arduino Web Server Dan Embedded Fuzzy Logic Di Pt. Inoac Polytechno Indonesia," *simantik-panca-sakti.ac.id*, vol. 3, no. 1, 2018, Accessed: Jan. 23, 2026. [Online]. Available: <https://simantik-panca-sakti.ac.id/index.php/simantik/article/view/25>
 - [26] M. Amin, R. Ananda, ... J. E.-J. T. dan S., and undefined 2019, "Analisis Penggunaan Driver Mini Victor L298N Terhadap Mobil Robot Dengan Dua Perintah Android Dan Arduino Nano," *mail.jurnal.stmikroyal.ac.id*, Accessed: Jan. 23, 2026. [Online]. Available: <https://mail.jurnal.stmikroyal.ac.id/index.php/jurteksi/article/view/396>
 - [27] Y. A. PRIATNA, "TA: PEMBUATAN DAN PENGUJIAN ALAT UKUR PUTARAN TURBIN ANGIN SUMBU VERTIKAL," Sep. 2020.
 - [28] D. Utama, M. M.-S. N. T. Elektro, and undefined 2019, "Sistem Pemantau Level Cairan Infus Pada Pasien Rawat Inap Di Rumah Sakit Menggunakan Sensor Infrared FC51," *prosiding.pnj.ac.id*, vol. 4, 2019, Accessed: Jan. 23, 2026. [Online]. Available: <https://prosiding.pnj.ac.id/index.php/SNTE/article/view/1073>
 - [29] F. Rizky Budiman, H. Saputra, A. Rini, J. T. Komputer, and N. Sriwijaya, "PERANCANGAN SISTEM PINTU OTOMATIS PADA WAREHOUSE BERBASIS ARDUINO DENGAN MENGGUNAKAN SENSOR IR," *ecosemica.net*, Accessed: Jan. 23, 2026. [Online]. Available: <https://ecosemica.net/index.php/HUMANITIS/article/view/800>
 - [30] M. Lamatenggo, P. T. Elektro, I. Wiranto, and W. Ridwan, "Perancangan

- Balancing Robot Beroda Dua Dengan Metode Pengendali PID Berbasis Arduino Nano,” *ejurnal.ung.ac.id*, Accessed: Jan. 23, 2026. [Online]. Available: <https://ejurnal.ung.ac.id/index.php/jjee/article/view/6906>
- [31] H. Dhani, ... N. R., E. and Material, and undefined 2024, “ASSESSMENT OF MOBILE ROBOT LOAD-CARRYING POTENTIAL VIA DC GEARBOX MOTOR TORQUE,” *ejournal.widyakarya.ac.id*, vol. 3, pp. 16–21, Accessed: Jan. 23, 2026. [Online]. Available: <https://ejournal.widyakarya.ac.id/index.php/metal/article/view/93>
- [32] M. Y. Tharam, S. A. Salim, and R. Rusman, “Lampu Mandiri Sebagai Salah Satu Fungsi Penerangan Jalan Kawasan Perkotaan,” *Vokasi J. Publ. Ilm.*, vol. 14, no. 1, pp. 16–29, Mar. 2019, Accessed: Mar. 04, 2025. [Online]. Available: <https://ejurnal.polnep.ac.id/index.php/vokasi/article/view/143>
- [33] E. Eliyani, R. Azka, ... B. B.-J. L. J. L., and undefined 2020, “Rancang Bangun Robot Semi Auto Beroda Pengambil dan Pelempar Bola Rugby 7S (Pass Robot) Berbasis Mikrokontroller ATMEGA2560,” *e-jurnal.pnl.ac.id*, vol. 17, no. 2, pp. 2549–8762, 2020, Accessed: Jan. 23, 2026. [Online]. Available: <https://e-jurnal.pnl.ac.id/litek/article/view/1965>
- [34] H. Junian, T. T.-J. T. Elektro, and undefined 2024, “SISTEM KONTROL KESEIMBANGAN ROBOT BERODA SATU,” *jurnalelektro.petra.ac.id*, Accessed: Jan. 23, 2026. [Online]. Available: <https://jurnalelektro.petra.ac.id/index.php/elk/article/view/28155>
- [35] I. Fajrin, “Pengujian Kapasitas Baterai Lithium-ion 18650 Menggunakan Metode Charge dan Discharge,” 2024, Accessed: Jan. 23, 2026. [Online]. Available: <http://repository.unissula.ac.id/id/eprint/34103>
- [36] A. Salam, M. Anshar, ... A. A.-J. A. E., and undefined 2024, “Rancang Bangun Sistem Navigasi Robot Otonom Waiter-Bot Berbasis Robot Operating System,” *repository.unhas.ac.id*, Accessed: Jan. 25, 2026. [Online]. Available: [https://repository.unhas.ac.id/id/eprint/47578/2/D041191099_skripsi_29-02-2024_bab1-2\(FILEminimizer\).pdf](https://repository.unhas.ac.id/id/eprint/47578/2/D041191099_skripsi_29-02-2024_bab1-2(FILEminimizer).pdf)
- [37] F. Rizky Budiman, H. Saputra, A. Rini, J. T. Komputer, and N. Sriwijaya, “Rancang Bangun Robot Pengumpul Bola Golf Menggunakan Sensor Inframerah, Ultrasonik dan ESP32-CAM,” *jurnal.polsri.ac.id*, Accessed: Jan. 25, 2026. [Online]. Available: <https://jurnal.polsri.ac.id/index.php/jupiter/article/view/11196>
- [38] B. Satria Pinandhita, S. Aurellia Zabrina, and A. N. Sihananto, “Robot Line Follower Maze Zolving Berbasis Short Path Algorithm,” 2024, Accessed: Jan. 25, 2026. [Online]. Available: <http://repository.pnb.ac.id/id/eprint/14250>
- [39] S. Prayoga, E. S.-J. of A. Electrical, and undefined 2024, “Implementasi Perencanaan Jalur menggunakan Algoritma Dijkstra pada Robot Roda Mecanum,” *jurnal.polibatam.ac.id*, Accessed: Jan. 25, 2026. [Online]. Available: <https://jurnal.polibatam.ac.id/index.php/JAEE/article/view/8470>
- [40] A. Tampenawas, ... B. N.-J., and undefined 2025, “Perancangan Alat Praktikum Percepatan Gravitasi Digital Menggunakan Sensor FC-51 Berbasis Arduino Uno,” *journal.univpgri-palembang.ac.id*, Accessed: Jan. 25, 2026. [Online]. Available: <https://journal.univpgri-palembang.ac.id/index.php/luminous/article/view/18672>

- [41] C. Trisani *et al.*, “Implementasi Algoritma Dijkstra dalam Menentukan Rute Terpendek dari Unika St. Thomas Medan ke Lapangan Merdeka,” *jurnal.polgan.ac.id*, vol. 14, no. 1, 2025, doi: 10.33395/jmp.v14i1.14892.

