

DAFTAR PUSTAKA

- Abdurahman, K. A., T. I. R. M. M., & T. A. I. I. S. (2020). *Perancangan Dan Implementasi Hidroponik Berbasis Internet of Things (IoT) Menggunakan Protokol Http Design and Implementation of Hydroponics Based on.* 7(2), 3862–3868.
- Afif, M. H., Sanjaya, R., Sauri, S., & Prasetyo, S. M. (2023). Sistem Perangkat Pengusir Hama Burung Emprit Atau Pipit Berbasis Sensor PIR Dan IoT. *LOGIC: Jurnal Ilmu Komputer Dan Pendidikan*, 1(3), 496–503.
- Akbar, S., & Ahmad, T. (2019). Enhance and Maintain Efficiency of Solar Panel using Auto Cleaning System. *International Journal of Engineering*, 6(05), 159–163. <https://doi.org/10.34259/ijew.19.605159163>
- Akbar, T., Suweken, G., Indrawan, G., & Aryanto, K. Y. E. (2019). Kotak-Kontak Pintar Pada Rumah Cerdas Berbasis Teknologi Internet of Things. *Jurnal Pendidikan Teknologi Dan Kejuruan*, 16(2), 278. <https://doi.org/10.23887/jptk-undiksha.v16i2.18937>
- Akyazi, Ö., Şahin, E., Özsoy, T., & Algül, M. (2019). A Solar Panel Cleaning Robot Design and Application. *European Journal of Science and Technology, October*, 343–348. <https://doi.org/10.31590/ejosat.638291>
- BMKG. (2024). *Indeks sinar ultraviolet.* Badan Meteorologi, Klimatologi Dan Geofisika. <https://www.bmkg.go.id/kualitas-udara/indeks-uv.bmkg>
- Chengxi, H., Junyan, O., Shaoyuan, Y., & Hailiang, Y. (2020). Design and Implementation of Multimeter with Error-proof Measurement Function in Power System. *2020 Asia Energy and Electrical Engineering Symposium, AEEES 2020*, 144–147. <https://doi.org/10.1109/AEEES48850.2020.9121524>
- Dedi Suarna, Zahir Zainuddin, Hazriani, & Edy Sopyan. (2023). Rancang Bangun Pengontrolan Alat Elektronik Berbasis Internet of Things (IoT). *Journal of Informatics, Electrical and Electronics Engineering*, 2(3), 75–82. <https://doi.org/10.47065/jieee.v2i4.682>

- Gopal, M., Chandra Prakash, T., Venkata Ramakrishna, N., & Yadav, B. P. (2020). IoT Based Solar Power Monitoring System. *IOP Conference Series: Materials Science and Engineering*, 981(3), 1–8. <https://doi.org/10.1088/1757-899X/981/3/032037>
- Guangul, F. M., & Chala, G. T. (2019). Solar energy as renewable energy source: SWOT analysis. *2019 4th MEC International Conference on Big Data and Smart City, ICBDSC 2019*, 1–5. <https://doi.org/10.1109/ICBDSC.2019.8645580>
- Hanafi, M. I., Laksana, E. P., Motor, A. S., Controller, S. C., Terbatukan, E., & Storage, C. (2023). Tenaga Bayu Mini Menggunakan Ac Servo Motor Sebagai Sumber Energi Peti Pendingin Ikan Pada. *Jurnal Maestro*, 6(2), 362–375.
- Hardianto, A., & Richa Watiasih. (2023). Design and Development of Alcohol Level Detector for Liquid Herbal using Fuzzy C-Means Method. *JEEE-U (Journal of Electrical and Electronic Engineering-UMSIDA)*, 7(2), 153–162. <https://doi.org/10.21070/jeee.u.v7i2.1671>
- Hardy, P. K. (2014). *Fabrication and Characterisation of a Nanocrystal Activated Schottky Barrier Solar Cell*.
- Harmini, H., & Nurhayati, T. (2017). Monitoring system of stand alone solar photovoltaic data. *ICECOS 2017 - Proceeding of 2017 International Conference on Electrical Engineering and Computer Science: Sustaining the Cultural Heritage Toward the Smart Environment for Better Future*, 254–258. <https://doi.org/10.1109/ICECOS.2017.8167144>
- Hashim, N., Mohammed, M. N., Al Selvarajan, R., Al-Zubaidi, S., & Mohammed, S. (2019). Study on Solar Panel Cleaning Robot. *2019 IEEE International Conference on Automatic Control and Intelligent Systems, I2CACIS 2019 - Proceedings, June*, 56–61. <https://doi.org/10.1109/I2CACIS.2019.8825028>
- Hermana, R., Setyoadi, Y., Aza, M. F., Mesin, T., & Semarang, U. P. (2022). *MILLING DENGAN KONTROL SMC DAN MESIN CNC MILLING DENGAN KONTROL ESP32 WIFI PENDAHULUAN CNC Milling yang ada di industri*

- masih memiliki harga yang mahal baik harga perangkat hardware maupun software yang digunakan untuk mengoperasikan mesin CNC Milling ter.* 24(2), 105–113.
- Hidayatullah, N. A., & Juliando, D. E. (2017). Desain dan Aplikasi Internet of Thing (IoT) untuk Smart Grid Power Sistem. *VOLT: Jurnal Ilmiah Pendidikan Teknik Elektro*, 2(1), 35. <https://doi.org/10.30870/volt.v2i1.1347>
- Imran, A., & Rasul, M. (2020). Pengembangan Tempat Sampah Pintar Menggunakan Esp32. *Jurnal Media Elektrik*, 17(2), 2721–9100. <https://ojs.unm.ac.id/mediaelektrik/article/view/14193>
- Kannan, N., & Vakeesan, D. (2016). Solar energy for future world: - A review. *Renewable and Sustainable Energy Reviews*, 62, 1092–1105. <https://doi.org/10.1016/j.rser.2016.05.022>
- Khan, M. F., Felemban, E. A., Qaisar, S., & Ali, S. (2013). Performance analysis on packet delivery ratio and end-to-end delay of different network topologies in wireless sensor networks (WSNs). *Proceedings - IEEE 9th International Conference on Mobile Ad-Hoc and Sensor Networks, MSN 2013*, 324–329. <https://doi.org/10.1109/MSN.2013.74>
- Krisciunas, K. (2023). How solar panels work, in theory and in practice. *AIP Advances*, 13(8). <https://doi.org/10.1063/5.0153883>
- Lambert, J., Monahan, R., & Casey, K. (2021). Power consumption profiling of a lightweight development board: Sensing with the INA219 and Teensy 4.0 microcontroller. *Electronics (Switzerland)*, 10(7). <https://doi.org/10.3390/electronics10070775>
- Lami, D. A., Sonalitha, E., & Subairi, I. (2022). Robot Tangan Terapi Stroke Menggunakan Metode Master-slave. *Jurnal Energy*, 12(2), 57–64. <https://doi.org/10.51747/energy.v13i2.1514>
- Li, C. C., & Dezfouli, B. (2019). Excalibur: An Accurate, Scalable, and Low-Cost Calibration Tool for Sensing Devices. *IEEE Sensors Journal*, 19(23), 11323–11336. <https://doi.org/10.1109/JSEN.2019.2934137>

- Lobo, E. T. S., Takaya, P. R., & Paledung, I. Bin. (2022). Realtime Monitoring Design of Solar Cell Power Plant Based on IoT. *Journal of Physics: Conference Series*, 2394(1). <https://doi.org/10.1088/1742-6596/2394/1/012028>
- Maarif, A., & Setiawan, N. R. (2021). Control of dc motor using integral state feedback and comparison with pid: Simulation and arduino implementation. *Journal of Robotics and Control (JRC)*, 2(5), 456–461. <https://doi.org/10.18196/jrc.25122>
- Mendenhall, W., Beaver, R. J., & Beaver, B. M. (2013). *Introduction to Probability & Statistics*.
- Mudofar Baehaqi, A. R. A. S. E. S. (2023). Performance Testing of DHT11 and DS18B20 Sensors as Server Room Temperature Sensors. *Mestro: Jurnal Teknik Mesin Dan Elektro*, 2(02), 6–11.
- Nezamisavojbolaghi, M., Davodian, E., Bouich, A., Tlemçani, M., Mesbahi, O., & Janeiro, F. M. (2023). The Impact of Dust Deposition on PV Panels' Efficiency and Mitigation Solutions: Review Article. *Energies*, 16(24). <https://doi.org/10.3390/en16248022>
- Pasaribu, F. I., & Reza, M. (2021). Rancang Bangun Charging Station Berbasis Arduino Menggunakan Solar Cell 50 WP. *RELÉ (Rekayasa Elektrikal Dan Energi) : Jurnal Teknik Elektro*, 3(2), 46–55.
- Patil, P. A., Bagi, J. S., & Wagh, M. M. (2018). A review on cleaning mechanism of solar photovoltaic panel. *2017 International Conference on Energy, Communication, Data Analytics and Soft Computing, ICECDS 2017*, 250–256. <https://doi.org/10.1109/ICECDS.2017.8389895>
- Permana, A. N., Wibawa, I. M. S., & Putra, I. K. (2021). DS18B20 sensor calibration compared with fluke hart scientific standard sensor. *International Journal of Physics & Mathematics*, 4(1), 1–7. <https://doi.org/10.31295/ijpm.v4n1.1225>
- Pratama, D., & Asnil, A. (2021). Sistem Monitoring Panel Surya Secara Realtime

- Berbasis Arduino Uno. *MSI Transaction on Education*, 2(1), 19–32.
<https://doi.org/10.46574/mted.v2i1.46>
- Priyatam, P. P. T. D. (2021). Analisa Radiasi Sinar Matahari Terhadap Panel Surya 50 WP. *RELE:Jurnal Teknik Elektro*, 4(1), 48–54.
<http://jurnal.umsu.ac.id/index.php/RELE/article/view/7825>
- Purwalaksana, A. Z. (2020). Sistem Monitoring Ketinggian Air dan Otomasi Penghidupan Lampu pada Budidaya Hidroponik Berbasis IoT. *Jurnal Ilmiah Maksitek*, 5(2), 169–176.
<https://makarioz.scencemakarioz.org/index.php/JIM/article/view/162>
- Ramadhan, B. W., & Hikmah Nuzul. (2020). Rancang Bangun Sistem Pemberi Pakan dan Pembersih Kotoran Pada Kandang Kelinci Berbasis Mikrokontroler Atmega 2560. *SinarFe7-3*, 3(1), 1–5.
- Rintiasti, A., Sunaryo, M., & Suhartono, A. A. (2019). *Monitoring Suhu Fermentasi Tembakau menggunakan Sensor Box IoT*. 4(1), 37–44.
- Riyana Fatimatus Zahrok, Setyawan Purnomo Sakti, & Dewi Anggraeni. (2021). *Rancang Bangun Pengontrol Jarak Menggunakan Motor Stepper Nema 17 Berbasis Mega 2560 Pro pada Ultrasonic Atomizer Spray Coating*. August, 1–14. <https://www.researchgate.net/publication/353702350>
- Sadi, S., Mulyati, S., & Putro, F. M. (2022). CURRENT AND VOLTAGE MONITORING SYSTEM BASED ON MEASUREMENTS ON SOLAR PANEL BASED ON ARDUINO UNO. *Journal of Research in Construction, Communication, and Commercial*, 1(1 SE-Articles), 16–26.
<http://journal.privietlab.org/index.php/jrccc/article/view/187>
- Sajid, M. A., Sam, N. N., & Faraby, M. D. (2021). Rancang Bangun Sistem Penggulung Kumparan Menggunakan GRBL. ... and Entrepreneur ..., 52–58.
<http://jurnal.politeknikbosowa.ac.id/index.php/JMAPLE/article/view/288%0Ahttp://jurnal.politeknikbosowa.ac.id/index.php/JMAPLE/article/viewFile/288/143>
- Samsugi, S., Yusuf, A. I., & Trisnawati, F. (2020). Sistem Pengaman Pintu

- Otomatis Dengan Mikrokontroler Arduino Dan Module Rf Remote. *Jurnal Ilmiah Mahasiswa Kendali Dan Listrik*, 1(1), 1–6. <https://doi.org/10.33365/jimel.v1i1.188>
- Saputra, B. Y., & Kiswantono, A. (2020). RANCANG BANGUN ALAT PERANGKAP SERANGGA DI PERSAWAHAN BERTENAGA SURYA DAN MENGGUNAKAN BLOWER. *SinarFe7*, 3(1), 1–5. <https://journal.fortei7.org/index.php/sinarFe7/article/view/277>
- Saputra, J. S., & Siswanto, S. (2020). Prototype Sistem Monitoring Suhu Dan Kelembaban Pada Kandang Ayam Broiler Berbasis Internet of Things. *PROSISKO: Jurnal Pengembangan Riset Dan Observasi Sistem Komputer*, 7(1). <https://doi.org/10.30656/prosisko.v7i1.2132>
- Saputra, R. H., Huda, A. M. M., Sahara, A., & Rohie, Y. R. D. (2020). *Analysis of Voltage and Electric Current in a Web-based Solar Power Plant*. *Iconit 2019*, 191–199. <https://doi.org/10.5220/0009444601910199>
- Saputri, F. R., & Dhaneswari, S. F. (2022). Sensor Design for Building Environment Monitoring System based on Blynk. *Ultima Computing : Jurnal Sistem Komputer*, 14(1), 36–41. <https://doi.org/10.31937/sk.v14i1.2661>
- Setiawan, A., Desriyanti, & Vidyastari, R. I. (2023). Perancangan Alat Pemberian Pakan dan Minum Ayam Broiler Secara Otomatis Menggunakan Notifikasi Blynk. *Digital Transformation Technology*, 3(1), 185–191. <https://jurnal.itscience.org/index.php/digitech/article/view/2610>
- Setiawan, B. J. (2023). Design and Build Voltage and Current Monitoring Parameters Device of Rechargeable Batteries in Real-Time Using the INA219 GY-219 Sensor. *Journal of Energy, Material, and Instrumentation Technology*, 4(2), 58–71. <https://doi.org/10.23960/jemit.v4i2.137>
- Setyowati, T. A., Lindawati, L., & Halimatussadiyah, R. A. (2019). Analisa Kualitas Layanan Internet pada Video Conference Berdasarkan Parameter QoS. *Seminar Nasional Inovasi Dan Aplikasi Teknologi Di Industri*, 231–235.
- Sindjoung, M. L. F., & Minet, P. (2022). Estimating and predicting link quality in

- wireless IoT networks. *Annales Des Telecommunications/Annals of Telecommunications*, 77(5–6), 253–265. <https://doi.org/10.1007/s12243-021-00835-1>
- Slamet Winardi, Dwi Suharso, D., Purnomo, H., & Budijanto, A. (2021). Battery Power Control and Monitoring System with Internet of Things Technology. *Ijconsist Journals*, 3(1), 07–12. <https://doi.org/10.33005/ijconsist.v3i1.56>
- Sreega, R., Dr K Nithyanthan, & B Nandhini, . (2017). Design and Development of Automated Appam Maker. *IJIRST-International Journal for Innovative Research in Science & Technology*, 3(11), 127–138. www.ijirst.org
- Sugiarktha, N., Ardana, I. G. N., Sugina, I. M., Widiantara, I. B. G., Suparta, I. N., & Adi, I. K. (2020). Preliminary design and test of a water spray solar panel cleaning system. *Journal of Physics: Conference Series*, 1450(1). <https://doi.org/10.1088/1742-6596/1450/1/012108>
- Suratno, S., & Cahyono, B. D. (2023). Rancang Bangun Sistem Pembangkit Listrik Tenaga Surya (PLTS) Sebagai Catu Daya Pompa Air Submersible. *Jurnal Teknik Elektro Uniba (JTE UNIBA)*, 7(2), 309–319. <https://doi.org/10.36277/jteuniba.v7i2.220>
- Suryana, D., & Ali, M. M. (2016). The Effect Of Temperature On Voltage Produced By Monocrystalline Solar Panel (Case Study : Baristand Industri Surabaya). *Jurnal Teknologi Proses Dan Inovasi Industri*, 2(1), 49–52.
- Swain, M. K., Mishra, M., Bansal, R. C., & Hasan, S. (2021). A Self-Powered Solar Panel Automated Cleaning System: Design and Testing Analysis. *Electric Power Components and Systems*, 49(3), 308–320. <https://doi.org/10.1080/15325008.2021.1937400>
- Wahid, H. A., Maulindar, J., & Pradana, A. I. (2023). Rancang Bangun Sistem Penyiraman Tanaman Otomatis Aglonema Berbasis IoT Menggunakan Blynk dan NodeMCU 32. *Innovative: Journal Of Social Science Research*, 3. <https://j-innovative.org/index.php/Innovative/article/download/1094/818>
- Wahidin, N. F., Yadie, E., & Putra, M. A. (2022). Analisis Perbandingan Solar

- Charging Controller (SCC) Jenis PWM Dan MPPT Pada Automatic Handwasher with Workstation Bertenaga Surya Politeknik Negeri Samarinda. *PoliGrid*, 3(1), 12. <https://doi.org/10.46964/poligrid.v3i1.1490>
- Wang, Z., Wen, J., Xing, J., & He, Y. (2006). Quantitative determination of diterpenoid alkaloids in four species of Aconitum by HPLC. *Journal of Pharmaceutical and Biomedical Analysis*, 40(4), 1031–1034. <https://doi.org/10.1016/j.jpba.2005.08.012>
- Wiyoga, P. (2023). *Perusahaan Industri Hilir tenaga surya mulai bangun pabrik di batam.* Kompas.Id. <https://www.kompas.id/baca/nusantara/2023/06/05/pemerintah-jaring-industri-hilir-tenaga-surya-di-batam>
- Yoga Alif Kurnia Utama. (2016). Perbandingan Kualitas Antar Sensor Suhu dengan Menggunakan Arduino Pro Mini. *E-Jurnal NARODROID*, 2(2), 145–150. <https://doi.org/https://doi.org/10.31090/narodroid.v2i2.210>
- Yulizar, D., Soekirno, S., Ananda, N., Prabowo, M. A., Perdana, I. F. P., & Aofany, D. (2023). *Performance Analysis Comparison of DHT11, DHT22 and DS18B20 as Temperature Measurement* (Vol. 1). Atlantis Press International BV. https://doi.org/10.2991/978-94-6463-232-3_5