

DAFTAR PUSTAKA

- [1] Anonim, “Statistik Kelapa Sawit Indonesia 2021,” Direktorat Statistik Tanaman Pangan, Hortikultura, dan Perkebunan, Badan Pusat Statistik, Jakarta, 2021.
- [2] Sinuhaji, N., R. B. Ginting, Benar, C. Lestiana, “Sistem Pendukung Keputusan untuk Menentukan Kualitas *Crude Palm Oil* sebagai Bahan Baku Minyak Goreng Menggunakan Matlab dengan Metode *Fuzzy Logic Tsukamoto*,” *Jurnal Informatika dan Perancangan Sistem (JIPS)*, vol. 4, no. 2, hal. 1–6, 2022.
- [3] Pratama, I., Ernah, “Analisis Proses Keputusan Pembelian Minyak Goreng Sawit: Studi Kasus pada Warga Korea di Kabupaten Bekasi,” *Jurnal Ilmu Keluarga dan Konsumen (JIKK)*, vol. 14, no. 2, hal. 176–188, 2021 doi: 10.24156/jikk.2021.14.2.176.
- [4] Supriyanto, S., “Pengeluaran untuk Konsumsi Penduduk Indonesia, Maret 2022,” Subdirektorat Statistik Rumah Tangga, Badan Pusat Statistik, Jakarta, 2022.
- [5] Anonim, “Komparasi *Brand Index* Minyak Goreng,” Top Brand Award, 2023, Tersedia dari: www.topbrand-award.com/komparasi_brand/bandingkan?id_award=1&id_kategori=2&id_subkategori=42 [URL dikunjungi pada 25 Agustus 2023].
- [6] Putri, A. D., A. R. Dewi. “Sistem Pendukung Keputusan Menerapkan Metode *Profile Matching* sebagai Alternatif Penentuan Minyak Goreng Terbaik,” *Jurnal Teknologi Sistem Informasi dan Sistem Komputer TGD*, vol. 6, no. 1, hal. 183–194, 2023, doi: 10.53513/jsk.v6i1.7397.
- [7] Masyithah, C., B. Aritonang, E. Gultom, “Pembuatan Arang Aktif dari Limbah Kulit Durian sebagai Adsorben pada Minyak Goreng Bekas untuk Menurunkan Kadar Asam Lemak Bebas dan Bilangan Peroksida,” *Jurnal Kimia Saintek dan Pendidikan*, vol. II, no. 2, hal. 66–75, 2018.
- [8] Deshmukh, R.K., “*The Effect of Repeatedly Cooking Oils on Health and Wealth of a Country: A Short Communication*,” *Journal of Food Processing*

- and Technology*, vol. 10, issue 8, *Walsh Medical Media*, hal. 1–4, 2019, doi: 10.35248/2157-7110.19.10.807.
- [9] Mishra, S., M. A. Firdaus, M. Patel, G. Pandey, “A Study on the Effect of Repeated Heating on the Physicochemical and Antioxidant Properties of Cooking Oils Used by Fried Food Vendors of Lucknow City,” vol. 3, no. 7, *Discover Food*, Springer Link, 2023, doi: 10.1007/s44187-023-00046-8.
- [10] Adhani, A., F. Fatmawati, “Pelatihan Pembuatan Lilin Aromaterapi dan Lilin Hias untuk Meminimalisir Minyak Jelantah bagi Masyarakat Kelurahan Pantai Amal,” *Jurnal Pengabdian Masyarakat Borneo (JPMB)*, vol. 3, no. 2, hal. 31–40, 2019, doi: 10.35334/jpmb.v3i2.1095.
- [11] Sahar, S. Sadaf, J. Iqbal, I. Ullah, H. N. Bhatti, S. Nouren, Habib-ur-Rehman, J. Nisar, M. Iqbal, “Biodiesel Production from Waste Cooking Oil: An Efficient Technique to Convert Waste into Biodiesel,” vol. 41, *Sustainable Cities and Society*, Elsevier, hal. 220–226, 2018, doi: 10.1016/j.scs.2018.05.037.
- [12] Brahma, S., B. Nath, B. Basumatary, B. Das, P. Saikia, K. Patir, S. Basumatary, “Biodiesel Production from Mixed Oils: A Sustainable Approach towards Industrial Biofuel Production,” *Chemical Engineering Journal Advances*, vol. 10, Elsevier, hal. 100284, 2022, doi: 10.1016/j.ceja.2022.100284.
- [13] Hadrah, H., M. Kasman, F. M. Sari, “Analisis Minyak Jelantah sebagai Bahan Bakar Biodiesel dengan Proses Transesterifikasi,” *Jurnal Daur Lingkungan*, vol. 1, no. 1, hal. 16-21, 2018, doi: 10.33087/daurling.v1i1.4.
- [14] Ferrusca, M. C., R. Romero, S. L. Martínez, A. Ramírez-Serrano, R. Natividad, “Biodiesel Production from Waste Cooking Oil: A Perspective on Catalytic Processes,” *Processes*, vol. 11, no. 7, MDPI, hal. 1952, 2023, doi: 10.3390/pr11071952.
- [15] Almady, S. S., A. I. Moussa, M. M. Deef, M. F. Zayed, S. M. Al-Sager, A. M. Aboukarima, “Biodiesel Production through the Transesterification of Non-Edible Plant Oils Using Glycerol Separation Technique with AC High Voltage,” *Sustainability*, vol. 16, no. 7, MDPI, hal. 2896, 2024, doi: 10.3390/su16072896.

- [16] Darojat, M. I., R. Rachmaditasari, M. Mahfud, “Pra Desain Pabrik Biodiesel dari *Palm Fatty Acid Distillate* (PFAD),” *Jurnal Teknik ITS*, vol. 13, no. 1, hal. F13–F18, 2024, doi: 10.12962/j23373539.v13i1.120713.
- [17] Miyuranga, K. A. V., U. S. P. R. Arachchige, R. A. Jayasinghe, G. Samarakoon, “*Purification of Residual Glycerol from Biodiesel Production as a Value-Added Raw Material for Glycerolysis of Free Fatty Acids in Waste Cooking Oil*,” *Energies*, vol. 15, no. 23, MDPI, hal. 8856, 2022, doi: 10.3390/en15238856.
- [18] Sangkharak, K., S. Klomklao, N. Paichid, T. Yunu. “*Statistical Optimization for Fatty Acid Reduction in Waste Cooking Oil Using a Biological Method and the Continuous Process for Polyhydroxyalkanoate and Biodiesel Production*,” *Biomass Conversion Biorefinery*, vol. 13, hal. 9841–9854, 2021, doi: 10.1007/s13399-021-01756-8.
- [19] Aworanti, O. A., A. O. Ajani, S. E. Agarry, K. A. Babatunde, O. D. Akinwumi, “*Evaluation of Process Parameters for Biodiesel Production from Vegetable and Palm Waste Frying Oils Using a Homogeneous Catalyst*,” *International Journal of Energy Engineering*, vol. 9, no. 2, *Scientific & Academic Publishing*, hal. 25–35, 2019, doi: 10.5923/j.ijee.20190902.01.
- [20] Muhammad, K., A. Yudhana, “Alat Uji Viskositas Biodiesel dari Minyak Goreng Bekas Berbasis Teknologi *Infrared*,” *TRANSMISI: Jurnal Ilmiah Teknik Elektro*, vol. 21, no. 3, hal. 79–83, 2019, doi: 10.14710/transmisi.21.3.79-83.
- [21] Drantantiyas, N. D. G., O. F. T. Maryana, I. Herlina, P. Santoso, “Potensi Cahaya Laser sebagai Sensor Kadar Asam Lemak Jenuh pada Minyak Jelantah,” *Jurnal Fisika Indonesia (JFI)*, vol. 24, no. 3, hal. 156–159, 2020, doi: 10.22146/jfi.v24i3.57418.
- [22] Zyaputra, A., A. Surapati, R. S. Rinaldi, “Perancangan Alat Pendeteksi Kualitas Minyak Goreng dengan Parameter Viskositas dan Densitas Menggunakan Metode *Fuzzy Logic*,” *Jurnal Amplifier: Jurnal Ilmiah Bidang Teknik Elektro dan Komputer*, vol. 11, no. 1, hal. 22–28, 2021, doi: 10.33369/jamplifier.v11i1.17133.

- [23] Huda, M., F. A. Soelistianto, N. Suharto, “*Telemonitoring Based Waste Cooking Oil Quality Detection and Sorting System,*” *Journal of Telecommunication Network* (Jurnal Jaringan Telekomunikasi), vol. 12, no. 4, hal. 265–269, 2022, doi: 10.33795/jartel.v12i4.516.
- [24] Rohim, A. M., P. Marwoto, S. Priatmoko, A. Syifa, “*Analysis FTIR Test, Viscosity, Density, Acid Number, and Organoleptic in Bulk Cooking Oil with Packaged Cooking Oil,*” *Jurnal Penelitian Pendidikan IPA (JPPIPA)*, vol. 9, no. 5, hal. 2613–2618, 2023, doi: 10.29303/jppipa.v9i5.2533.
- [25] Astuti, T. D., “Pengaruh Penggorengan Berulang terhadap Kualitas Minyak Goreng,” *Borneo Journal of Medical Laboratory Technology (BJMLT)*, vol. 1, no. 2, hal. 62–66, 2019, doi: 10.33084/bjmlt.v1i2.713.
- [26] Kurniasih, T., G. A. Utama, R. R. Sood., “Distribusi Perdagangan Komoditas Minyak Goreng Indonesia 2021,” Direktorat Statistik Distribusi, Badan Pusat Statistik, Jakarta, 2021.
- [27] Tari, N. W. A., R. Wirawan, K. A. Hadi, “Analisis Perbedaan Minyak Goreng Kemasan dan Curah Berdasarkan Parameter Konstanta Dielektrik,” Skripsi, Fakultas MIPA, Universitas Mataram, 2018.
- [28] Awaliyah, N., “Biodiesel Minyak Jelantah,” Amerta Media, Banyumas, 2021.
- [29] Kurniasih, E., “Merancang Energi Masa Depan dengan Biodiesel,” Penerbit Andi, Yogyakarta, 2020.
- [30] Tipler, P. A., G. Mosca, “*Physics for Scientists and Engineers,*” Edisi ke-6, W. H. Freeman and Company, 2008.
- [31] Young, H. D., R. A. Freedman, “*University Physics with Modern Physics,*” Edisi ke-14, Pearson Education Limited, 2016.
- [32] Abdullah, M., “Fisika Dasar I,” Fakultas Matematika dan Ilmu Pengetahuan Alam, Institut Teknologi Bandung, 2016, Tersedia dari: <https://fmipa.itb.ac.id/wp-content/uploads/sites/7/2017/12/Diktat-Fisika-Dasar-I.pdf> [URL dikunjungi pada 27 September 2023].
- [33] Walker, J., “*Fundamental of Physics,*” Edisi ke-10, John Wiley & Sons, Inc., 2014.

- [34] Timberlake, K., W. Timberlake, “*Basic Chemistry*,” Edisi ke-6, Pearson Education, Inc., 2019.
- [35] Zumdahl, S. S., S. A. Zumdahl, “*Chemistry*,” Edisi ke-9, Cengage Learning, 2014.
- [36] Supranto, J., “*Statistik Teori & Aplikasi Edisi 8 Jilid 1*,” Edisi ke-8, Penerbit Erlangga, Jakarta, 2016.
- [37] Sabrina, F. A., W. V. Nandita, D. D. Maharani, “Uji Asumsi Klasik untuk Menghindari Pelanggaran Asumsi Klasik pada Regresi Linier *Ordinary Least Squares* (OLS) dalam Ekonometrika,” *Jurnal Ilmiah Manajemen Ekonomi Dan Akuntansi (JIMEA)*, vol. 1, no. 1, hal. 195–203, 2023, doi: 10.62017/jimea.v1i1.505.
- [38] Dunn, O. J., V. A. Clark, “*Basic Statistics: A Primer for the Biomedical Sciences*,” Edisi ke-4, John Wiley & Sons, Inc., 2009.
- [39] Kadir, A., “*Arduino dan Sensor - Tuntunan Praktis Mempelajari Penggunaan Sensor untuk Aneka Proyek Elektronika Berbasis Arduino*,” Penerbit ANDI, Yogyakarta, 2018.
- [40] Anonim, “*Datasheet of Load Cell (5 kg)*,” SIMAC Electronics GmbH, 2022, Tersedia dari: <https://joy-it.net/en/products/SEN-HX711-05> [URL dikunjungi pada 27 September 2023].
- [41] Khan, H., “*Datasheet of KY-025 Reed Switch Sensor*,” DatasheetHub, 2023, Tersedia dari: www.datasheethub.com/ky-025-reed-switch-sensor/ [URL dikunjungi pada 14 Agustus 2024].
- [42] Depari, S. S. B., D. Hamdani, R. Medriati, “Pengembangan Alat Peraga Viskositas Menggunakan Sensor *Mini Reed Switch Magnetic* Berbasis Arduino Uno,” *Jurnal Penelitian Pembelajaran Fisika (JP2F)*, vol. 15, no. 1, hal. 18–30, 2024, doi: 10.26877/jp2f.v15i1.17461.
- [43] Wiryadinata, R., J. Lelono, Alimuddin, “Aplikasi Sensor LDR (*Light Dependent Resistant*) sebagai Pendeteksi Warna Berbasis Mikrokontroler,” *Jurnal Sistem Komputer*, vol. 4, no. 1, hal. 12–16, 2014.
- [44] Anonim, “*LDR Sensor Module & How LDR Sensor Works*,” 2020, Tersedia dari: www.electroduino.com/ldr-sensor-module-how-ldr-sensor-works/ [URL dikunjungi pada 27 Agustus 2023].

- [45] Anonim, “*Datasheet of To-18 Ceramic Package Photocells NSL-19M51,*” 2016, Tersedia dari: <https://docs.rs-online.com/7251/0900766b8156674e.pdf> [URL dikunjungi pada 29 Juli 2024].
- [46] Muharnis, Khairudinsyah, “Analisa Perbandingan Pengukuran Intensitas Cahaya *Peaktech* Tipe 5035 dengan Sensor LDR Berbasis Mikrokontroler Atmega 8535 di Gedung Teknik Elektro Politeknik Negeri Bengkalis,” *Jurnal Sainstek STT Pekanbaru*, vol. 5, no. 1, hal. 1–6, 2017.
- [47] Saputra, R., N. Safitri, A. Deolika, “Rancangan Sensor Cahaya sebagai Penerangan Jalan Otomatis pada Miniatur Komplek Pendidikan Yayasan Al-Ma’arif NU,” *Journal of Information Technology (JIFOTECH)*, vol. 3, no. 1, hal. 6–10, 2023, doi: 10.46229/jifotech.v3i1.555.
- [48] Agarwal, N., “*Difference Between LDR and Photodiode,*” *Electronics For You*, 2024. Tersedia dari: www.electronicsforu.com/technology-trends/learn-electronics/difference-between-ldr-and-photodiode. [URL dikunjungi pada 15 Agustus 2024].
- [49] Pratama, E. W., A. Kiswantonono, “*Electrical Analysis Using ESP-32 Module in Realtime,*” *Journal of Electrical Engineering and Computer Sciences (JEECS)*, vol. 7, no. 2, hal. 1273–1284, 2022, doi: 10.54732/jeeecs.v7i2.21.
- [50] Anonim, “ESP32 DevKit ESP32-WROOM GPIO *Pinout,*” 2018, Tersedia dari: www.circuits4you.com/2018/12/31/esp32-devkit-esp32-wroom-gpio-pinout/ [URL dikunjungi pada 25 Agustus 2023].
- [51] Mohanan, V., “*DOIT ESP32 DevKit V1 Wi-Fi Development Board – Pinout Diagram & Arduino Reference,*” *Circuitstate Electronics*, 2022, Tersedia dari: www.circuitstate.com [URL dikunjungi pada 30 September 2023].
- [52] Aji, B. A. S., F. Z. Rahmanti, “Dasar Pemrograman dalam Bahasa C,” Deepublish, Sleman, 2022.
- [53] Budijanto, A., S. Winardi, K. E. Susilo, “*Interfacing dengan ESP32,*” Scopindo Media Pustaka, Surabaya, 2021.
- [54] Chaitanya, “*ESP32 vs ESP8266 – Which One To Choose?,*” *ElectronicsHub*, 2024, Tersedia dari: <https://www.electronicshub.org/esp32-vs-esp8266/> [URL dikunjungi pada 24 September 2023].

- [55] Csele, M., “*Fundamentals of Light Sources and Lasers*,” John Wiley & Sons, Inc., 2004.
- [56] Anonim, “*Stable Purple Blue Beam Light Visible 5mW 405nm Laser Pointer Laser Pen Powerful*,” 2024, Tersedia dari: www.3dcart-jjones.com.3dcartstores.com/Stable-Purple-Blue-Beam-Light-Visible-5mW-405nm-Laser-Pointer-Laser-Pen-Powerful_p_16648.html [URL dikunjungi pada 10 Juni 2024].
- [57] Suhendar, A. S. Pramudyo, P. Pakpahan, “Rancang Bangun Pengendali Adaptif untuk Menjaga Stabilitas Jaringan Akibat Beban Lebih Peralatan Listrik Rumah Tangga,” *Protek: Jurnal Ilmiah Teknik Elektro*, vol. 3, no. 1, hal. 1–6, 2016, doi: 10.33387/protk.v3i1.34.
- [58] Saraswati, I., B. W. Komara, Suhendar, H. Haryanto, “*Automatic Water Level Sensor dan Pendeteksi Keruh Air Kolam Renang dengan Sensor Turbidity Berbasis IoT*,” *Jurnal Ilmiah Setrum*, vol. 12, no. 1, hal. 83–90, 2023, doi: 10.36055/setrum.v12i1.20336.
- [59] Huda, A. S. M., T. A. Zuraiyah, F. L. Hakim, “*Prototype Alat Pengukur Jarak dan Sudut Kemiringan Digital Menggunakan Sensor Ultrasonik dan Accelerometer Berbasis Arduino Nano*,” *Bina Insani ICT Journal*, vol. 6, no. 2, hal. 185–194, 2019.
- [60] Ivory, R. A., N. Kholis, Nurhayati, F. Baskoro, “*Review Penggunaan Sensor Suhu terhadap Respon Pembacaan Skala pada Inkubator Bayi*,” *Jurnal Teknik Elektro*, vol. 10, no. 1, hal. 185–194, 2021, doi: 10.26740/jte.v10n1.p185-194.
- [61] Aziz, I., S. Nurbayti, B. Ulum, “*Esterifikasi Asam Lemak Bebas dari Minyak Goreng Bekas*,” *Jurnal Kimia Valensi*, vol. 2, no. 2, hal. 384–388, 2011, doi: 10.15408/jkv.v2i2.201.
- [62] Anonim, “Standar Nasional Indonesia (SNI) 7709:2019, Minyak Goreng Sawit,” Komite Teknis 67-04, Makanan dan Minuman, Badan Standarisasi Nasional, Jakarta, 2019.
- [63] Ghozali, I., “*Aplikasi Analisis Multivariate dengan Program IBM SPSS 26*,” Edisi ke-10. Badan Penerbit Universitas Diponegoro, Semarang, 2021.