

ABSTRAK

Farhan Ardiansyah Siregar, 2026. Sistem Pendukung Keputusan Penentuan Jenis Perbaikan AC Mobil Menggunakan Metode Simple Additive Weighting (SAW) Berbasis Website pada Srikandi AC Mobil. Skripsi. Program Studi Teknik Informatika, Fakultas Teknik, Universitas PGRI Madiun. Pembimbing (I) Alim Citra Aria Bima, S.Pd., M.Kom. Pembimbing (II) Yoga Prisma Yuda, S.Kom., M.Kom.

Sistem Pendukung Keputusan penentuan jenis perbaikan AC mobil berbasis website dikembangkan untuk membantu mekanik dalam menentukan rekomendasi jenis perbaikan AC mobil secara cepat, tepat, dan objektif di Bengkel Srikandi AC Mobil. Proses penentuan jenis perbaikan yang masih dilakukan secara manual berdasarkan pengalaman mekanik menyebabkan proses pengambilan keputusan memerlukan waktu lebih lama dan berpotensi menghasilkan keputusan yang kurang tepat. Penelitian ini bertujuan merancang dan membangun sistem pendukung keputusan berbasis website yang mampu memberikan rekomendasi jenis perbaikan AC mobil berdasarkan gejala kerusakan yang dialami kendaraan. Metode pengembangan sistem yang digunakan adalah Agile, sedangkan metode pengambilan keputusan menggunakan Simple Additive Weighting (SAW). Sistem dibangun menggunakan Framework Laravel dengan database MySQL. Fitur yang tersedia meliputi pengelolaan data kriteria, data alternatif perbaikan, basis pengetahuan, indikator kerusakan, proses perhitungan SAW, hasil rekomendasi, riwayat hasil, pengaturan bengkel, serta cetak laporan dalam format PDF. Hasil penelitian menunjukkan bahwa sistem mampu membantu mekanik dalam menentukan rekomendasi jenis perbaikan AC mobil secara lebih cepat, terstruktur, objektif, dan akurat berdasarkan hasil perhitungan metode SAW. Pengujian menggunakan Black Box Testing menunjukkan seluruh fungsi sistem berjalan sesuai kebutuhan, sedangkan pengujian System Usability Scale (SUS) memperoleh hasil yang menunjukkan sistem memiliki tingkat usability yang baik sehingga layak digunakan sebagai media pendukung pengambilan keputusan pada Bengkel Srikandi AC Mobil.

Kata Kunci: Sistem Pendukung Keputusan, Jenis Perbaikan AC Mobil, *Simple Additive Weighting (SAW)*, *Website*, *Laravel*, *MySQL*.

ABSTRACT

Farhan Ardiansyah Siregar, 2026. A Website-Based Decision Support System for Smartphone Selection Based on Consumer Needs at Magnus Celluler Using the Simple Additive Weighting (SAW) Method. Undergraduate Thesis. Informatics Engineering Study Program, Faculty of Engineering, Universitas PGRI Madiun. Supervisor (I) Alim Citra Aria Bima, S.Pd., M.Kom. Supervisor (II) Yoga Prisma Yuda, S.Kom., M.Kom.

The website-based Decision Support System for determining the appropriate type of car air conditioner repair was developed to assist mechanics in identifying the most suitable repair solution quickly, accurately, and objectively at Srikandi AC Mobil. The existing repair decision-making process, which relies on the experience and judgment of mechanics, often requires considerable time and may result in less accurate repair recommendations. This study aims to design and develop a website-based decision support system capable of providing recommendations for the appropriate type of car air conditioner repair based on the identified symptoms of damage. The system was developed using the Agile software development method, while the Simple Additive Weighting (SAW) method was implemented as the decision-making approach. The system was built using the Laravel Framework with MySQL as the database management system. The available features include criteria management, repair alternative management, knowledge base management, damage indicator input, SAW calculation, recommendation results, calculation history, workshop settings, and PDF report generation. The results of this study indicate that the developed system is capable of assisting mechanics in determining the appropriate type of car air conditioner repair more quickly, systematically, objectively, and accurately based on the SAW calculation results. Functional testing using the Black Box Testing method demonstrated that all system functions operated as expected. In addition, the System Usability Scale (SUS) evaluation indicated that the system achieved a good level of usability, confirming that it is suitable for supporting decision-making processes at Srikandi AC Mobil.

Keywords: *Decision Support System, Car Air Conditioner Repair, Simple Additive Weighting (SAW), Website, Laravel, MySQL.*