

ABSTRAK

PENGEMBANGAN DASHBOARD PENGAMBILAN KEPUTUSAN PADA SISTEM INFORMASI MANAJEMEN FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

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Pengelolaan data akademik dan non-akademik yang terintegrasi sangat penting untuk mendukung pengambilan keputusan di perguruan tinggi. Namun, Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Lampung masih menghadapi kendala dalam penyajian informasi yang efisien melalui Sistem Informasi Manajemen SAIDATA. Penelitian ini bertujuan mengembangkan *dashboard* pengambilan keputusan berbasis *Data-Driven Decision Making* (DDDM) untuk memudahkan pimpinan fakultas dalam memantau dan menganalisis data akademik, umum, dan kemahasiswaan. Penelitian menggunakan metode *Scrum* dengan delapan *sprint* pengembangan serta pengujian sistem menggunakan *Black-Box Testing*. *Dashboard* dibangun menggunakan *framework* Laravel dan *Highcharts* untuk menampilkan visualisasi interaktif dengan fitur *filter*, *tooltip*, *modal detail*, dan ekspor CSV. Hasil menunjukkan seluruh skenario pengujian berjalan sesuai harapan, dan *dashboard* mampu menyajikan informasi secara *real-time*, akurat, serta sesuai peran pengguna seperti Dekan, Wakil Dekan, Ketua Jurusan, dan TPMPS. Sistem ini terbukti meningkatkan efektivitas pengelolaan data serta mendukung pengambilan keputusan berbasis data di lingkungan fakultas. Disarankan untuk penelitian selanjutnya menambahkan fitur notifikasi otomatis dan analisis prediktif guna memperluas fungsionalitas sistem.

Kata Kunci: *Dashboard*, SAIDATA, *Decision Support System*, DDDM, *Scrum*.

ABSTRACT

DEVELOPMENT OF A DECISION-MAKING DASHBOARD IN THE MANAGEMENT INFORMATION SYSTEM OF THE FACULTY OF MATHEMATICS AND NATURAL SCIENCES

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Integrated management of academic and non-academic data is essential to support decision-making in higher education. However, the Faculty of Mathematics and Natural Sciences, University of Lampung, still faces challenges in presenting information efficiently through its Management Information System, SAIDATA. This study aims to develop a decision-making dashboard based on Data-Driven Decision Making (DDDM) to assist faculty leaders in monitoring and analyzing academic, administrative, and student-related data. The research employs the Scrum method through eight development sprints and system testing using Black-Box Testing. The dashboard was built using the Laravel framework and Highcharts for interactive visualization, equipped with features such as filters, tooltips, detailed modals, and CSV export. The results show that all test scenarios performed as expected, and the dashboard successfully delivers real-time, accurate, and role-based information for users such as the Dean, Vice Deans, Department Heads, and TPMPS. The system effectively enhances data management efficiency and supports data-driven decision-making within the faculty. Future research is recommended to integrate automated notifications and predictive analytics to further extend system functionality.

Keywords: *Dashboard, SAIDATA, Decision Support System, DDDM, Scrum.*