

ABSTRAK

Pengelolaan data kesehatan di Provinsi Jawa Timur yang masih terpisah antar instansi dan bergantung pada metode manual menyebabkan proses pemantauan distribusi penyakit dan layanan kesehatan menjadi kurang efektif. Kondisi tersebut menghambat analisis tren penyakit, identifikasi kesenjangan layanan kesehatan antar wilayah, serta pengambilan keputusan berbasis data oleh Dinas Kesehatan Provinsi Jawa Timur. Penelitian ini bertujuan untuk menerapkan metode *Business Intelligence Roadmap* dalam membangun Dashboard visualisasi data distribusi penyakit dan layanan kesehatan di Provinsi Jawa Timur serta mengevaluasi fungsionalitas sistem menggunakan *Black Box Testing*. Metode penelitian menggunakan enam tahapan *Business Intelligence Roadmap* yang meliputi perencanaan hingga implementasi sistem. Proses *Extract, Transform, Load* (ETL) dilakukan menggunakan *Python* untuk mengintegrasikan lima dataset dari *API Open Data Jawa Timur* periode 2020–2025 ke dalam *data warehouse MySQL* dengan skema *Galaxy Schema*. Dashboard kemudian dikembangkan menggunakan *Microsoft Power BI*. Hasil penelitian menunjukkan bahwa Dashboard yang dibangun memiliki lima halaman visualisasi, yaitu Overview, Distribusi Penyakit, Pelayanan Puskesmas, Kelas Rumah Sakit, dan Akreditasi Rumah Sakit, yang mampu menyajikan informasi kesehatan secara terintegrasi dan interaktif. Pengujian menggunakan *Black Box Testing* terhadap 10 skenario uji memperoleh tingkat keberhasilan 100% dengan seluruh fitur berstatus “Berhasil”. Berdasarkan hasil penelitian, Dashboard yang dihasilkan dinilai layak digunakan dan mampu mendukung pemantauan serta pengambilan keputusan berbasis data bagi Dinas Kesehatan Provinsi Jawa Timur dalam upaya meningkatkan kualitas layanan kesehatan.

Kata Kunci : *Business Intelligence Roadmap, Dashboard Visualisasi, Distribusi Penyakit, Layanan Kesehatan, Power BI.*

ABSTRACT

The management of health data in East Java Province, which is still separated between agencies and relies on manual methods, makes the process of monitoring disease distribution and health services less effective. This condition hinders the analysis of disease trends, identification of health service gaps between regions, and data-driven decision-making by the East Java Provincial Health Office. This study aims to apply the Business Intelligence Roadmap method in building a visualization dashboard for disease distribution and health services in East Java Province and evaluate system functionality using Black Box Testing. The research method uses six stages of the Business Intelligence Roadmap, ranging from planning to system implementation. The Extract, Transform, Load (ETL) process was carried out using Python to integrate five datasets from the East Java Open Data API for the 2020–2025 period into a MySQL data warehouse with the Galaxy Schema scheme. The dashboard was then developed using Microsoft Power BI. The results show that the dashboard has five visualization pages: Overview, Disease Distribution, Community Health Center Services, Hospital Class, and Hospital Accreditation, which are able to present health information in an integrated and interactive manner. Testing using Black Box Testing on 10 test scenarios achieved a 100% success rate with all features achieving the status "Successful". Based on the research results, the resulting Dashboard is deemed suitable for use and capable of supporting data-based monitoring and decision-making for the East Java Provincial Health Office in an effort to improve the quality of health services.

Keywords: *Business Intelligence Roadmap, Visualization Dashboard, Disease Distribution, Healthcare, Power BI.*