APLIKASI PENDATAAN DAN FRAUD DETECTION PADA UMKM DI INSTANSI DINAS KOPERASI DAN UMKM KECAMATAN BENGKALIS

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ABSTRACT

The Bengkalis District Cooperatives and MSMEs Service faces problems with data collection, location monitoring, as well as licensing and patent registration processes, especially due to the mobility of business actors and the potential for fictitious MSMEs. This research designs and develops a multiplatform application using a prototyping method that includes MSME data collection modules, licensing, patent registration, training information, and fraud detection features. The fraud detection feature works on a rule-based basis by verifying geolocation via GPS, matching addresses and business coordinates, detecting data duplication. NIK/business name, as well as recording location changes and notifications for officer validation. Functional test results and user feedback show that all main features work according to the test scenario. Users assess that the licensing and patent registration process is easier than the manual method. For officers, MSME data is neater and easier to monitor. Location verification helps flag inconsistent data so that fictitious registration practices can be prevented from the start. These findings strengthen efforts to digitize public services and improve MSME governance in Bengkalis District.

Keywords: MSMEs, Licensing, Fraud Detection, Prototyping, Geolocation, Digital Public Services, Multiplatform.