VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELAGAVI

A PROJECT REPORT ON

"CRIME RATE DETECTION USING K-MEANS ALGORITHM"

Submitted in partial fulfillment for the award of Degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE & ENGINEERING

By

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CERTIFICATE

This is to certify that the project entitled "CRIME RATE DETECTION USING K-MEANS ALGORITHM" has been successfully completed by

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the bonafide students of **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the Year 2023–24. It is certified that all corrections/suggestions indicated for Internal Assessmenthave been incorporated in the report deposited in the departmental library. The project reporthas been approved as it satisfies the academic requirements in respect of Project work prescribedfor the Bachelor of Engineering Degree.

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DECLARATION

We,

SHREYAS R KALE

SHRIDHAR S

SIDDARTH Y K

SUCHITH H C

hereby declare that the dissertation entitled **"CRIME RATE DETECTION USING K-MEANS ALGORITHM"** is completed and written by us under the supervision of our guide **Mr. Venkatesh**, Senior Associate Professor, Department of Computer Science and Engineering, Alva's Institute of Engineering and Technology, Moodbidri, in partial fulfillment of requirements for the award of the degree **BACHELOR OF ENGINEERING** in **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAVI** during the **academic** year 2023-24. The dissertation report is original and it has not been submitted forany other degree in any university.

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ABSTRACT

One of the primary challenges faced by crime analysts is the identification of specific crime patterns. While automated tools have improved the analysis of larger-scale density-based trends, such as background crime levels, pinpointing precise patterns at a granular level remains a daunting task. To address this challenge, our Crime Rate Prediction System leverages the power of the K-means algorithm. By analyzing historical crime data and clustering similar crime patterns, the system can predict future crime rates in specific regions with greater accuracy. This predictive capability empowers law enforcement agencies with valuable insights, enabling them to develop proactive crime prevention strategies. Moreover, the K-means algorithm efficiently categorizes data points into clusters, allowing the system to recognize subtle patterns and forecast potential crime hotspots. This functionality is particularly beneficial for resource allocation, as it enables law enforcement agencies to prioritize interventions in areas with a higher likelihood of criminal activity. In essence, our Crime Rate Prediction System enhances law enforcement efforts by providing timely and actionable insights. By optimizing resource allocation and facilitating proactive interventions, the system plays a vital role in mitigating the occurrence of crimes and fostering safer communities.