

# Trend Analysis of Crime Statistics in Northeastern Mindanao, Philippines

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**Abstract:** *This study conducted trend analysis of crime statistics in Caraga Region by describing and forecasting the crime statistics from 2005-2021 in terms of indexed crime incidence, non-indexed crime incidence, and crime resolution rate. The study utilized a predictive research design which can play a crucial role in understanding and forecasting crime patterns. Descriptive design was also be used to determine the crime incidence and resolution rate in Caraga region. The study focused in Caraga Region. The crime statistics being analyzed are from the different provinces of region. These are Surigaodel Norte, Surigao del Sur, Agusan del Norte, Agusan del Sur, and the Province of Dinagat Islands. The sources of data for this study are the police reports collated by the Philippine Statistical Authority published in the Regional Social and Economic Trends (RSET). The recorded crime rates indicate that both index and non-index crimes have been present in the region. Additionally, the relatively moderate crime resolution rate suggests that law enforcement efforts have been partially successful in resolving reported crimes. The projected rates show a gradual increase over time, indicating the need for continued efforts in crime prevention and resolution.*

**Keywords:** Trend Analysis, Crime Statistics, Northeastern Mindanao

## REFERENCES

- [1]. Chalfin, A., and McCrary, J. (2018). Are US cities underpoliced? Theory and evidence. *Rev. Econ. Stat.* 100, 167–186. doi: 10.1162/REST\_a\_00694
- [2]. Costa, A. M. (2010). The economics of crime: a discipline to be invented and a Nobel prize to be awarded. *J. Policy Model* 32, 648–661. doi: 10.1016/j.jpolmod.2010.07.010
- [3]. Lau, Tim (2020). Predictive Policing Explained. Retrieved from <https://www.brennancenter.org/our-work/research-reports/predictive-policing-explained>
- [4]. Lopez, A. (2021). 22% drop in index, non-index crimes logged in Caraga. Retrieved from <https://www.pna.gov.ph/articles/1146544>
- [5]. Pande, V., Samant, V., and Nair, S. (2016). Crime Detection using Data Mining. Retrieved from <https://www.ijert.org/crime-detection-using-data-mining>
- [6]. Senate Economic Planning Office (2013). Crime Statistics at a Glance. Retrieved from <https://legacy.senate.gov.ph/publications/AAG%202013-05%20-%20Crime%20Statistics.pdf>
- [7]. Shah, N., Bhagat, N., and Shah M. (2021). Crime forecasting: a machine learning and computer vision approach to crime prediction and prevention. Retrieved from <https://vciba.springeropen.com/articles/10.1186/s42492-021-00075-z>
- [8]. Stebbins, S. (2019). The Midwest is Home to Many of America's Most Dangerous Cities. *USA Today*. Available at: <https://www.usatoday.com/story/money/2019/10/26/crime-rate-higher-us-dangerous-cities/40406541/>
- [9]. Tastle, W. J. (2013). "Introduction to artificial networks and law enforcement analytics," in *Intelligent Data Mining in Law Enforcement Analytics*. eds. M. Buscema and W. J. Tastle (Dordrecht, Netherlands: Springer), 1–9.
- [10]. Zhang, X. Q. (2016). The trends, promises and challenges of urbanisation in the world. *Habitat Int.* 54, 241–252. doi: 10.1016/j.habitatint.2015.11.018

- [11]. Zhu, Q., Zhang, F., Liu, S., and Li, Y. (2019). An anticrime information support system design: application of K-means-VMD-BiGRU in the city of Chicago. *Inf. Manag.* 2019. doi: 10.1016/j.im.2019.103247