

## Police CrimeStat

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**Introduction.** This project aimed to automate the manual entry of the incident reports of the Philippine National Police. The system is projected to provide effective monitoring and updated statistical reports that will be used for decision-making processes. All police stations within the designated area will have an installed application that is centralized nationwide. Thus, data analysis would be easier and useful for law enforcement agencies for long-term crime bust programs. The system has the following specific objectives: first is to provide easier access to blotter reports, to improve decision making with interactive maps, to promote information sharing, and lastly, to offer statistical information of incidents. Evaluation of incident reports by an authorized officer is necessary before encoding them into the system. The data that the system needs includes the following: complainant and suspect's name(s), case details, and the type of offense. Inputted incident reports

can be seen by the central office and other police stations; however, data manipulation is accessed only in the central office. The system can search and display case details in a printable format based on the user's specified query. By utilizing the Google map application program interface (API), the user can quickly locate and see the crime's exact location. This particular feature is challenging because there is a need to structure a detailed data mining design to promptly generate reliable reports. Once data are encoded in the system, the central office can create reports according to their needs. The system development started with data gathering by interviewing the Non-Uniform Personnel of Murcia Police station and performed the requirements analysis for the system.

**Methods.** This project was implemented using the Incremental Project Model in which one iteration of the software development cycle may be in progress at the same time. The proponent developed the actual system after meeting all the requirements needed for planning and analysis, and design. It was then presented to the police station's non-uniform personnel for pilot testing whether the system functionalities and features have reached their desired outcome.

**Results.** Real-time, analytics, dynamic, and interactive were the general features of Police CrimeStat. These features established the uniqueness of the system compared to other incident reporting systems. The system will be installed in every station. The non-uniform personnel (NUP) will serve as the administrator of the system. A separate website was designed intended for the information of the public user. Once the system is installed in the police station of a certain city or municipality, the recognized barangays only are displayed on the system. An appropriate longitude and latitude specification must maintain an accurate location of the incident reports later on. Several people were given evaluation sheets after testing the system to identify the sections and areas of the system that need improvement. The result of the evaluation conducted is very good, with an overall percentage of 96.4%, which means that the system was effective and satisfy with the needs of the Philippine National Police.

**Conclusion.** As tested, the non-uniform personnel of Murcia Police Station signified that the system could add more ease to their work since a projection of statistical reports can be viewed in the system. As recommended, there should be a monthly checking of the system database to ensure that the system meets the required results and expectations. Lastly, the system would be later improved and used by other agencies like the Department of Social Welfare Development (DSWD) to monitor minor individuals who have committed crimes in a particular area.

**Practical Value of the Paper:** The project significantly contributes to the Philippine National Police specifically in monitoring incident reports not only in one area but throughout the whole country. Statistical reports can be generated easily, thus crime analysis and decision making processes would be much faster.

### References

- Cunningham, M. (2019). *3 Features your Law Enforcement Case Management Must Have*. <https://crimecenter.com/law-enforcement-case-management-software-essential-features>
- Hyatt, N. (2006). Incident Investigation and Accident Prevention in the Process & Allied Industries. Dyadem Engineering Corp.
- Ibrahim, N. (2011). *International Journal of Software Engineering and Its Applications Consistency Rules between UML Use Case and Activity Diagrams Using Logical Approach*, Vol. 5 No. 3. <https://pdfs.semanticscholar.org/b8f8/ebbbe4e8f2bd72caaced1e5751480d23487.pdf>
- Montejo, F.G. (2006). Police Investigation [Lessons for Criminology Students]. Cacho Hermanos, Inc.
- Oaminal, C. P. (2005). Criminal Law Manual for Philippine National Police Officers. Central Book Supply
- Perallos, A. (2016). Intelligent Transport Systems: Technologies and Applications. John Wiley and Sons, Ltd.
- Rogerson, M. (2016). *Security Journal, The Poetics of Crime: Understanding and Researching Crime and Deviance Through Creative Sources*, Vol. 29, Issue 3. <https://search.proquest.com/pqrl/docview/1800067983/fulltext/8AA43CA323CA45F4PQ/16?accountid=34542>
- Rouse, M. (2013, September 20). *MySQL*. <https://searchoracle.techtarget.com/definition/MySQL>
- Tuazon, J.M. (2011). *PNP deploys an e-blotter system for faster crime resolution*. <http://www.gmanetwork.com/news/scitech/content/231749/pnp-deploys-e-blotter-system-for-faster-crime-resolution/story>

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