A new, cheap and fast IT system predicts crimes better organizes police shifts

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Scientists from the Spanish National Police Corps (CNP) and from the University of Granada (UGR) have developed an IT system based in mathematical algorithms which allows to predict how many and what type of crimes are going to be committed in the next police shift.

It's about using scientific methods for police patrolling, and it's the first time in History that predictive police methods are combined with a mathematical patrolling model.

This breakthrough could better organize police patrolling and districting, which would mean a reduction of money spent and the number of victims of a crime.

The research has been carried out by Miguel Camacho Collados, police inspector at the Strategic Plannification and Coordination Unit of the Spanish National Police Corps, and researcher at the Statistics and Operations Research Department of the UGR.

Part of this research has been carried out with the collaboration of the University of California Los Ángeles (UCLA), the most selective public university of the United States, and the Los Ángeles Police Department (LAPD), where Camacho Collados held a Fulbright fellowship last year.

The research is focused on dynamic systems applied to crime models, and it's aimed at influencing the analysis and development of mathematical and statistical models for identifying temporal patterns for

criminal acts.

As its lead author explains, the new system "is based in a mathematical, multi-criteria algorithm that, considering multiple performance attributes (such as workload, the patrolling area or the number of crimes committed in the last police shift), assigns the patrol a certain surveillance area, thus preventing the commission of crimes in the next shift, based on the crime risk prediction for that area."

"The main advance of our work is that it strengthens crime prevention, not crime suppression. If we succeed in putting a police officer in the right place at the right time, we will save a lot in human resources and, which is even more important, we will have fewer victims."

Miguel Camacho explains that this new IT tool, which is able to establish the patrolling area and distribute police officers quickly, "can't in any case be a substitute to police experience and intuition. It's a resource inspired by 'big data' technology which can be greatly useful in our job."

Provided by University of Granada