

VACCINE

Visual Analytics for Command, Control, and Interoperability Environments
A U.S. Department of Homeland Security Center of Excellence

VALET – Visual Analytics Law Enforcement Toolkit

Benefit: Our VALET technology provides law enforcement agencies with a suite of tools that increase situational awareness and enable the spatiotemporal exploration of multivariate data sets and police records. These tools provide advanced analytic capabilities that allow officers to develop and test hypotheses about law enforcement activities within various areas of their communities.

Mission Need

Analyzing high volume criminal, traffic and civil (CTC) incident data is a crucial component for preventing crimes and judiciously allocating resources for the law enforcement community. However, with data sets increasing in size and complexity, and as budgets shrink and departments scale back, the ability of local law enforcement agencies to effectively analyze the data being collected becomes increasingly strained. As such, we have developed a visual analytics toolkit for enhanced exploration and analysis of multivariate spatiotemporal law enforcement data to enable advanced data exploration and analysis of CTC incidence reports. The VALET technology incorporates both intelligence led policing and community-based policing methods that enable law enforcement agencies to assess and mitigate risks due to criminal activities in their areas of responsibility.

Data Layers:

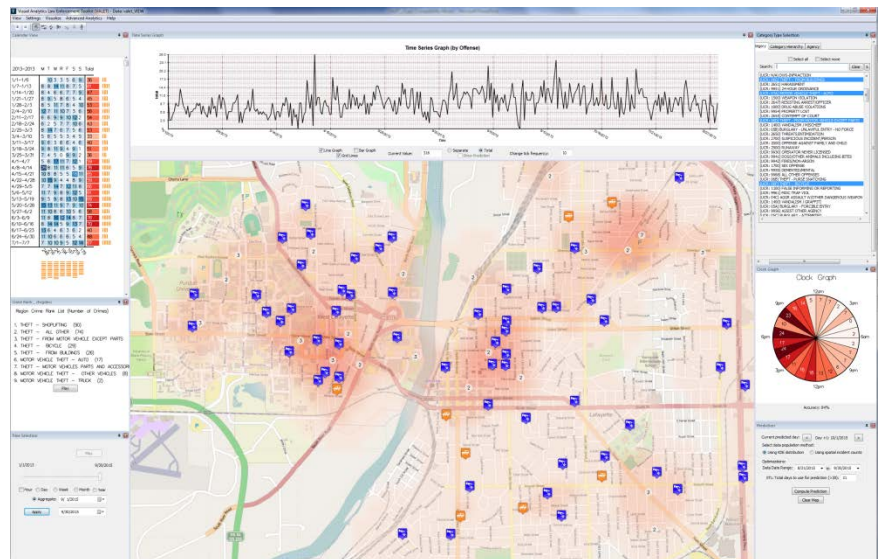
- Criminal, Traffic, Civil
- Calendar Events
- Weather
- Census & Demographic
- GIS
- Moon Phase

Collaborators:

- Purdue University
- Arizona State University
- Purdue Police
- West Lafayette Police
- Lafayette Police
- Tippecanoe County Sheriff
- Indianapolis Police
- NYPD
- Ohio State Highway Patrol
- Evansville Police

Funded by:

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The Visual Analytics Law Enforcement Toolkit where the user is exploring crimes against person incident reports for Tippecanoe County, IN. Linked views show the line graph (top), calendar view (top-left) and clock view (middle-right) temporal plots. An interactive menu showing the CTC offenses is shown on the top-right. A crime forecasting panel (bottom-right) provides users with the ability to predict future crime levels. The middle-left view shows the trending view that provides a quick way to ascertain the offenses, names, and locations that are trending for a given region and date range. A time slider that ties all linked views together is shown on the bottom-left.

Early Development

Lab Prototype

Commercial Product

For more information, contact:

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<http://www.VisualAnalytics-CCI.org>