



The Benefits of Predictive Emergency Services

In an environment of constrained resources and evolving populations and infrastructure, emergency service providers are challenged with doing more with less, faster and smarter.

A few innovative law enforcement organizations are adopting predictive crime models to better allocate their resources and improve community service. Now, your fire department can take the lead on using artificial intelligence (AI) to better serve your mission.

Discover how our data scientists can accelerate your success:

- » Improve your response times
- » Reduce your personnel and equipment expenses
- » Better allocate your limited resources
- » Predict emergency calls up to a year in advance more accurately down to the day and hour
- » Pinpoint emergencies before they happen to call box, block group, or structure
- » Use predictive risk scoring to prioritize your building inspections
- » Predict 911 calls by type (e.g., false alarm, structure fire, water rescue, medical etc.)
- » Understand how local business types and citizen characteristics impact 911 calls
- » Optimize Battalion and Station Areas for individual neighborhoods to avoid redundancy

Our artificial intelligence (AI) solutions address key challenges in emergency services:

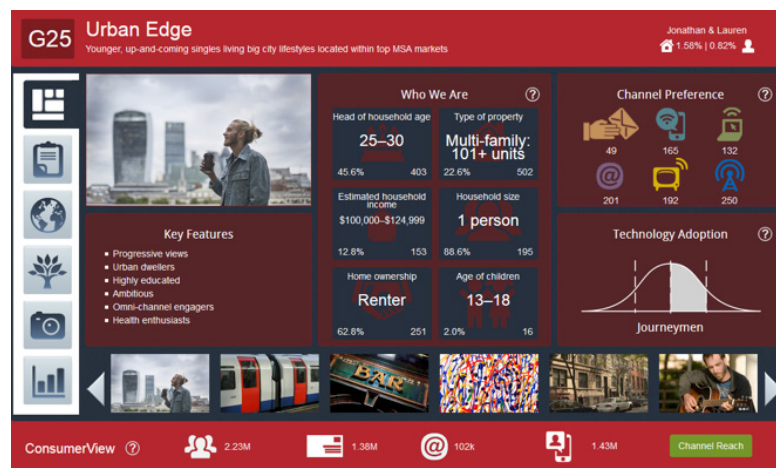
Challenges	Solutions
Pressure to improve service metrics like response times	Combining predictive and geospatial analytics can reduce unit response time based on conditions
Under-staffing risks lives and burns out firefighters, over-staffing wastes money	Predictive response planning can optimize personnel allocation and save millions
There are more buildings than your fire marshals can possibly inspect expeditiously	Structure risk modeling and heat maps enable you to prioritize building inspections on hazard score
Potential waste of resources on false alarms	AI-powered triage, supported by drone sensor technology can reduce false alarm responses
Budgets are shrinking and other city departments are vying for this limited pool	Evidence-based planning supports budget negotiations and grant applications
Station area overlap contributes to confusion	Predictive mapping identifies strategies to improve departmental collaboration citywide

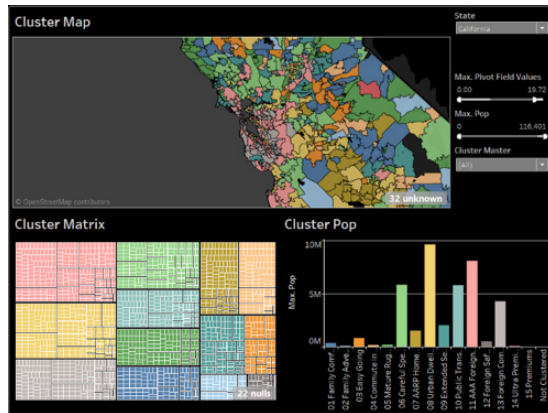
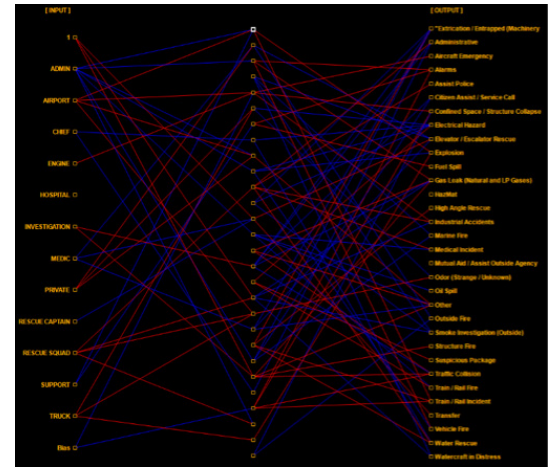
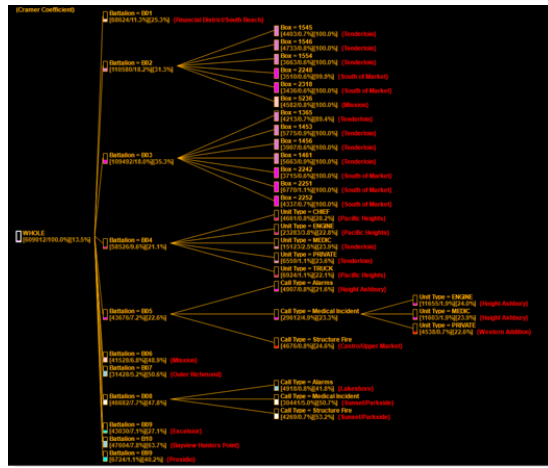
Example: Predicting emergency calls by date, location, type and number of units

We start with your emergency response historical data such as:

Call Date/Time	Call Type	Neighborhood	Battalion	Station Area	Unit Type	Priority	...
5/18/2017 18:41	Medical Incident	Bayview Hunters Point	B10	25	ENGINE	3	...
5/18/2017 18:25	Structure Fire	West of Twin Peaks	B09	15	ENGINE	3	...
5/18/2017 17:46	Traffic Collision	Financial District/South Beach	B01	13	MEDIC	3	...
5/18/2017 20:30	Alarms	Lakeshore	B08	19	ENGINE	3	...
5/18/2017 03:20	Citizen Assist / Service Call	Chinatown	B01	13	TRUCK	2	...
5/18/2017 23:36	Smoke Investigation (Outside)	Russian Hill	B01	28	RESCUE SQUAD	3	...
5/18/2017 23:52	Gas Leak (Natural and LP Gases)	Chinatown	B01	2	ENGINE	3	...

Next, we enrich your data with third-party geo-demographics, firmographics (business data) and psychographics to uncover real-world factors underlying fire and rescue risk for each city block or custom territory you define.





Our data scientists test a variety of advanced analytic systems and methods, like neural network modeling and decision trees, to predict when and where various types of emergency calls are likely to occur, and what type of response will be needed. We compare many modeling techniques and parameter tunings to achieve the most accurate risk score possible.

Best of all, we deliver this valuable intelligence to you using intuitive and interactive visual maps and charts that anyone on your team can learn to use, without needing a background in statistics. Interactive risk heatmaps and interactive dashboards showing risk scores and intervention priorities are just one example.

If you're already using business intelligence tools, our predictive models and scores can be imported or linked into your existing systems and updated on a regular basis.

Getting started

Join us in an onsite or live online demonstration to learn more.
The future of emergency services awaits you!

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