Darwin Ecosystem uses AI to help police departments find recruits who will fit in

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Above: The Darwin Ecosystem logo.

Image Credit: Darwin Ecosystem

Recruiting police officers is not an easy task. The hiring process can take four to six months, and precincts across the U.S. are experiencing staffing shortages. The growth rate for police and detectives is significantly slower than the average for other professions, with a rate of 4 percent compared to 7 percent, according to the Bureau of Labor Statistics.

Police departments in Minneapolis and elsewhere have taken the extraordinary step of eliminating some entrance tests to broaden the intake of candidates, but Thierry Hubert, CEO of Dallas-based analytics company Darwin Ecosystem, thinks he has a better solution: an artificially intelligent "insights" platform called the Projected Personality Interpreter (PPI).

The PPI leverages the power of IBM's Watson to analyze the personality, emotional state, and social connections of police recruits. In 2016, Darwin announced a strategic partnership with Police Exam Solutions (PES), an exam and recruitment provider headquartered in Arlington, Massachusetts, to integrate the system with the online evaluations would-be officers complete as part of the recruitment process.

"It tells us about how a new candidate is going to fit into their squad," John Hayes, director of sales and communications at Police Exam Solutions (PES), told VentureBeat in a phone interview, "and it gives police chiefs an opportunity to measure a number of traits regarding their personality."

Here's how it works: Police departments that sign up for PES' services have officers in training write 200-word essays in response to prompts like "Tell us how you might improve your hometown" and "Describe your favorite vacation."
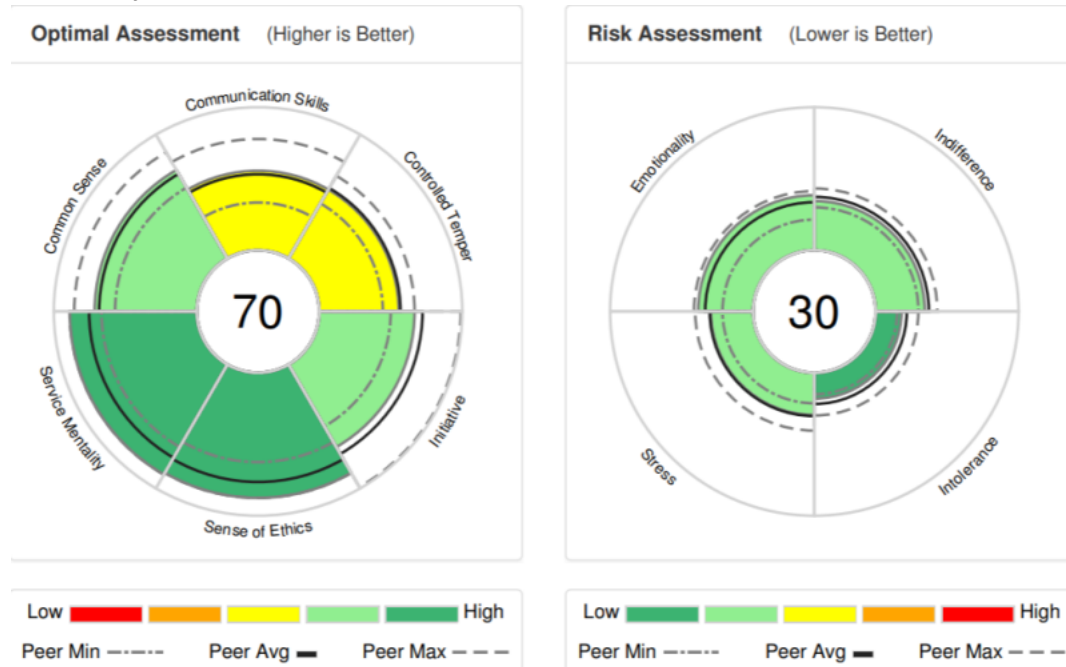
Above: The results of a PPI test.
Image Credit: Police Exam Solutions

The test questions are deceptively innocent, Hubert said. "We don't care about what they write, but how they write it."
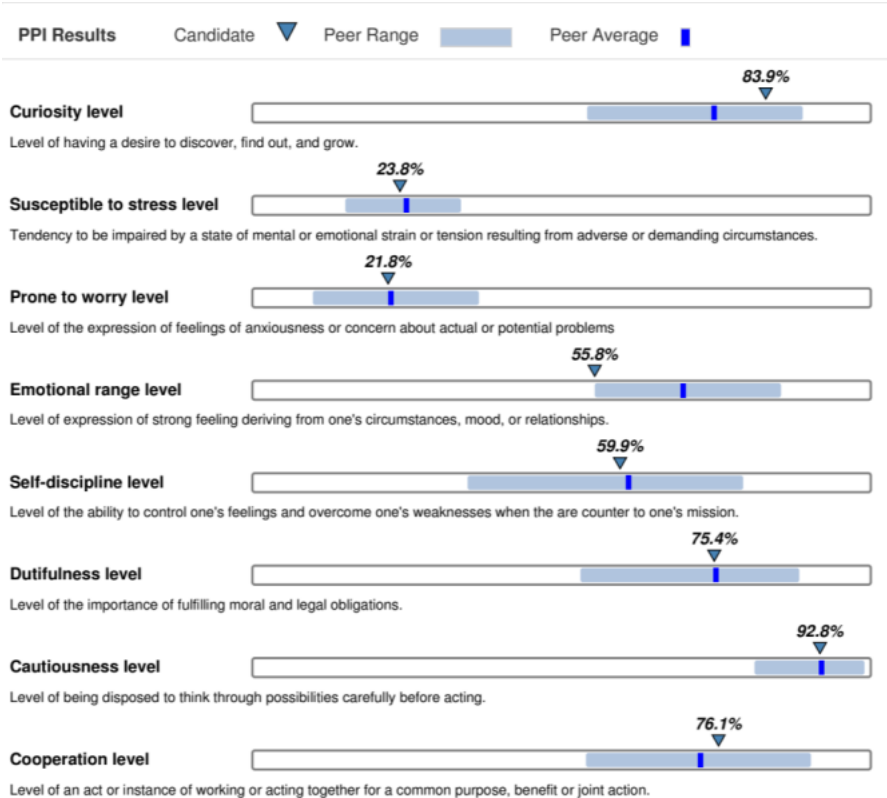
When candidates hit the submit button, responses are funneled through Darwin's system, which spits out scores for 52 different traits, including communication skills, sense of ethics, and service mentality. It compares those scores to a baseline, and evaluating officers get a color-coded report highlighting the recruit's best and worst performance: Optimal traits are green, areas of concern are yellow, and potential warning signs are red.

That might sound invasive, but PES CEO Gretel Hartman said the company has taken pains to ensure that the process is transparent. The results are anonymized, and recruits are informed beforehand that they'll be subjected to the PPI in the course of testing. "We've had zero pushback from candidates," she said. "It doesn't come across as threatening."

Hubert stressed that the PPI isn't intended to replace the full psychological exams that more than 90 percent of police departments around the country require. (Thirty-eight states mandate that job applicants pass a psychological evaluation.) Rather, it attempts to project group dynamics. "You can measure a person's skills, but you want them to be compatible with the culture of the organization," he said.

AI-powered personality tests are nothing new, of course. Firms like consumer goods giant Unilever have been using neuroscience-based tests and interview questions to analyze job candidates' body language, intonation, and word choice for years. And startups like Mya Systems use AI to assess CVs, screen candidates, and pair them with jobs.

But Hubert says the PPI, which costs an average of $20 per recruit (depending on volume), is much more economical than the alternatives. A Myers-Briggs Type Indicator (MBTI), for example, can cost up to $40 per test taker.

PPI Results   Candidate ▼   Peer Range ▬   Peer Average ▮

83.9%
Curiosity level
Level of having a desire to discover, find out, and grow.

23.8%
Susceptible to stress level
Tendency to be impaired by a state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

21.8%
Prone to worry level
Level of the expression of feelings of anxiousness or concern about actual or potential problems

55.8%
Emotional range level
Level of expression of strong feeling deriving from one's circumstances, mood, or relationships.

59.9%
Self-discipline level
Level of the ability to control one's feelings and overcome one's weaknesses when the are counter to one's mission.

75.4%
Dutifulness level
Level of the importance of fulfilling moral and legal obligations.

92.8%
Cautiousness level
Level of being disposed to think through possibilities carefully before acting.

76.1%
Cooperation level
Level of an act or instance of working or acting together for a common purpose, benefit or joint action.

Above: Traits highlighted in the PPI test.
Image Credit: Darwin Ecosystem

An additional advantage is the system's ability to spot trends that might otherwise go undetected.

PES administers the PPI on a two-year cycle, and in comparing 2016 test results with 2018 data, Hartman noticed a dramatic decline in scores related to communication and ability to control temper. "We can only surmise what it might be about," she said, "But it never would have come to our attention had it not been for the [PPI]."

In the future, Hubert envisions the PPI helping place recruits in police departments that match their temperament. "We can use the system to figure out if a person is much better for a certain area [and] help distribute talent," he said.

But he also has an eye on expansion. Next week, the PPI will launch to the public with a subscription plan for enterprises. Corporations will be able to pay $100 per employee for unlimited analyses of questionnaires, which Hubert says will allow managers to identify, for example, which employees are highly susceptible to stress.

"It gives clients the ability to observe changes in personality over time," he said.

Darwin has its fingers in lots of pies. In August 2015, the company launched the Darwin Awareness Optimizer, a subscription service that curates news articles, tweets, and blogs in a personalized email digest. In October 2016, it fed speeches from presidential candidates into the PPI, analyzing how they ranked against each other in terms of traits like "assertiveness" and "openness." And it's developing an electroencephalography (EEG) system that can track brainwaves and interpret the intentions behind them.

If you ask Hayes and Hartman, though, the PPI is the best thing that the company has cooked up yet.

"There's no better way to find recruits with the kind of compassion and leadership qualities that make a great officer," Hayes said. "It's extremely valuable."