

What Algorithmic Injustice Looks Like in Real Life

A computer program rated defendants' risk of committing a future crime. These are the results.

by Julia Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner, May 25, 2016, 11:47 a.m.



Bernard Parker, who was rated high risk by the COMPAS program. (Josh Ritchie for ProPublica)

Courtrooms across the nation are using computer programs to predict who will be a future criminal. The programs help inform decisions on everything from bail to sentencing. They are meant to make the criminal justice system fairer — and to weed out human biases.

ProPublica tested one such program and found that it's often wrong — and biased against blacks. (Read our story.)

We looked at the risk scores the program spit out for more than 7,000 people arrested in Broward County, Florida in 2013 and 2014. We checked to see how many defendants were charged with new crimes over the next two years — the same benchmark used by the creators of the algorithm. Our analysis showed:

- The formula was particularly likely to falsely flag black defendants as future criminals, wrongly labeling them this way at almost twice the rate as white defendants.
- White defendants were mislabeled as low risk more often than black defendants.

What does that look like in real life? Here are five comparisons of defendants — one black and one white — who were charged with similar offenses but got very different scores.

Two Shoplifting Arrests

James Rivelli, 53.

Machine Bias

There's software used across the country to predict future criminals. And it's biased against blacks. **Read the story.**

In August 2014, Rivelli allegedly shoplifted seven boxes of Crest Whitestrips from a CVS. An employee called the police. When the cops found Rivelli and pulled him over, they found the Whitestrips as well as heroin and drug paraphernalia in his car. He was charged with two felony counts and four misdemeanors for grand theft, drug possession, and driving with a suspended license and expired tags.

Past offenses: He had been charged with felony aggravated assault for domestic violence in 1996, felony grand theft also in 1996, and a misdemeanor theft in 1998. He also says that he was incarcerated in Massachusetts for felony drug trafficking.

COMPAS score: **3 — low**

Subsequent offense: In April 2015, he was charged with two felony counts of grand theft in the 3rd degree for shoplifting about \$1,000 worth of tools from a Home Depot.

He says: Rivelli says his crimes were fueled by drug use and he is now sober. “I’m surprised [my risk score] is so low,” Rivelli said in an interview in his mother’s apartment in April. “I spent five years in state prison in Massachusetts.”

Robert Cannon, 18.

In December 2013, Cannon was caught shoplifting a cell phone and two pairs of headphones from a Wal-Mart (together valued at \$171.52), and was charged with misdemeanor petty theft.

Past offense: One earlier misdemeanor petty theft in Miami in 2012.

COMPAS score: **6 — medium**

Subsequent offenses: None.

He says: We were unable to contact Cannon. We visited his last known address and was told by the residents that they did not know him and that they could not pass on a message to him.

Two Drug Possession Arrests

Dylan Fugett, 20.

In February 2013, Fugett was charged with a felony for cocaine possession, and two misdemeanors for possession of marijuana and drug paraphernalia.

Past offense: In 2010, he was charged with a felony for an attempted burglary.

COMPAS score: **3 — low**

Subsequent offenses: Fugett was caught with marijuana and drug paraphernalia twice more in 2013. Then, during a traffic stop in 2015, when he was arrested on a bench warrant, he admitted that he was hiding eight baggies of marijuana in his boxers. He was charged with marijuana possession with intent to sell.

He says: Fugett says his low risk score seems like an accurate assessment. “Everybody sees me as a thug because I used to have earrings and tattoos,” Fugett said in an interview at his mother’s house in April. “But I really am just a big old teddy bear.”

Bernard Parker, 21.

During a January 2013 traffic stop for expired registration tags, cops found an ounce of marijuana in Parker’s car. He was charged with felony drug possession with intent to sell.

Past offense: In 2011, he was arrested for running from the cops and tossing away a baggie that was suspected to contain cocaine.

COMPAS score: **10 — high**

Subsequent offenses: None.

He says: “I haven’t been in trouble with the law,” Parker said when interviewed at his grandmother’s house in April. “I try to stay out of their way.”

Two Burglary Arrests

Anthony Vitiello, 30.

In April 2014, a cop spotted Vitiello breaking open an air conditioner unit behind someone’s house to steal copper tubing out of it. When confronted, he admitted he had stolen parts from the same unit before and was coming back for more. He was charged with felony possession of burglary tools and misdemeanor prowling/loitering.

Past offenses: A felony charge for check-forgery and a juvenile misdemeanor.

COMPAS score: **2 — low**

Subsequent offenses: Three subsequent felony burglaries, all within the next year. In one burglary, he threw a brick through a person’s kitchen window and climbed in, but the person came home while he was there, and he ran away. He then broke into another person’s house, where he was finally caught. In another burglary, he broke into someone’s house and stole jewelry, a camcorder, three Kindles, a camera, and car keys. Most recently, he broke someone’s bedroom window, climbed in and stole \$500 in cash.

He says: We were unable to make contact with Vitiello. We visited his last known address and left letters for him there but did not get any response.

Hassheim White, 18.

In January 2014, a cop stopped White and a friend on the street. White was carrying a pair of car-stereo speakers, some flashlights, a tire gauge, and some coins. He confessed that he and his friend had stolen them from cars they had broken into. White was charged with two felony counts of burglary, misdemeanor petty theft and misdemeanor prowling/loitering.

Past offenses: Two juvenile felonies.

COMPAS score: **8 — high**

Subsequent offenses: None.

He says: “I’m done with that lifestyle,” White said in an interview at his home in April. “It used to be home to home, couch to couch, theft to theft. Now it’s shift to shift, paycheck to paycheck. I’ve got a child on the way.”

Two DUI Arrests

Gregory Lugo, 36.

In October 2014, Lugo crashed his Lincoln Navigator into a Toyota Camry. When a police officer arrived at the scene of the accident, Lugo fell over several times and an almost-empty bottle of gin was found in his car. He was charged with DUI and with driving with a suspended license.

Past offenses: Three previous DUIs (in 1998, 2007, and 2012), and a misdemeanor battery in 2008.

COMPAS score: **1 — low**

Subsequent offense: Two days later, Lugo was charged with two counts of misdemeanor battery for domestic violence.

He says: Lugo says he is now sober and a low risk. “You take the alcohol away, and I am

not a violent person,” Lugo said in an interview at his home in April.

Mallory Williams, 29.

In October 2013, Williams hit a parked car in a parking lot. She was charged with six misdemeanor counts of DUI, leaving the scene of an accident, and resisting arrest without force.

Past offenses: Two misdemeanors in Virginia in 2006 and 2012.

COMPAS score: **6 — medium**

Subsequent offenses: None.

She says: We were unable to make contact with Williams. She did not respond to attempts to reach her through her last known phone numbers and email addresses.

Two Petty Theft Arrests

Vernon Prater, 41.

In the summer of 2013, he shoplifted \$86.35 worth of tools from a Home Depot in North Lauderdale, and was charged with felony petty theft.

Past offenses: Prater served a five-year prison sentence in Florida for an armed robbery and another attempted robbery in 1998. He was also arrested for another armed robbery in South Carolina in 2006.

COMPAS score: **3 — low**

Subsequent offenses: Prater went on to break into a warehouse and steal \$7,700 worth of electronics, tools and appliances. He was charged with 30 felony counts, including burglary, grand theft in the third degree, and dealing in stolen property when he pawned the stolen goods. He confessed to the owner of the warehouse that he had taken the items because he had a drug problem and promised to pay him back later. Prater received an eight-year sentence for the thefts and is now in Florida state prison.

He says: We were unable to make contact with Prater through his court-appointed attorneys.

Brisha Borden, 18.

In 2014, Borden and a friend picked up a blue Huffy bicycle and a Razor scooter that were sitting unlocked outside an apartment building, and started to ride them down the street. When the owner saw them and confronted them, Borden and her friend dropped the bike and scooter and ran away. A neighbor called the cops, and the two girls were charged with misdemeanor petty theft and burglary.

Past offense: Four juvenile misdemeanors.

COMPAS score: **8 — high**

Subsequent offenses: None

She says: Borden did not respond to requests for an interview through friends, relatives, and letters left in person at her last known address.

Correction, May 26, 2016: This post incorrectly stated one of the dates of misdemeanor charges filed against Mallory Williams. The correct dates are 2006 and 2012.

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