

How we found a notorious killer using Social Network Analytics.

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My passion is solving puzzles. I start with a massive, jumbled heap of data, and I analyze it to identify people to target. I cultivated my expertise in the daunting field of criminal intelligence, where I developed methods for targeting suspects.

Over the years I have been involved in remarkable cases. The challenges have been steep. But the methods I developed were proven. They helped make the world a safer place.

My colleagues and I have started to apply those methods in a very different field—marketing—so as to greatly improve ways to identify people who are best to target for marketing messages. The result is a huge lift in response rates—including sales, product inquiries, clicks, market share, and retention—and therefore marketing ROI.

The methods are based on SNA (social network analysis) and predictive analysis identifiers of who will do what next. The SNA underpinning means we look for connections in the data. We also predict connections and influence flows between people and things such as addresses, phone numbers, websites, locations, and timings. The methods are described elsewhere (see www.PeerAnalytics.com.au).

The analytical principles I developed and used to create SNA software is now used by TK TYPES OF COMPANIES. But before major companies began using it to effectively target customers, I used it in conjunction with the Australian police to hunt down a cold-blooded killer. It remains one of my most difficult, and most satisfying cases—identifying the infamous Backpackers murderer.

Backpackers Serial Murder Case

The most notorious serial killer in Australia's history is Ivan Milat, who was convicted of abducting and murdering seven young backpackers in the 1990s. The police solved the case with the assistance of SNA software I developed. (Since then, I've further developed the analytical principles in the software and made them uniquely available via the SNA Predictive SaaS service.)



Serial murderer Ivan Milat

In 1992, two bushwalkers found a rotting corpse in the dense Belanglo forest a few hours southwest of Sydney. The body of 22-year-old British backpacker Joanne Walters was the first uncovered in the serial killings. Over the next year, a team of several hundred police officers unearthed the remains of six more bodies in a forest that was starting to resemble a cemetery.

The public's fear was palpable. The government offered a \$500,000 bounty for information, and fragments of information poured in. It needed to be analyzed in combination with police and government databases.

I clearly remember the police chief saying they had no real leads—to the point that basically everyone in Australia was a suspect. He gave the team and my software a chilling command: “Go and get us a shortlist.”

The data we had to work with came from police sources and government databases. We had vast information about names, addresses, observations, and data files on gun ownership, vehicle registrations, times of day, movements of cars and people, and so on. One unusual dataset that later proved helpful was gym memberships (on the suspicion that the killer had an interest in fitness).

We were driven. We were determined to find the monster responsible for seven gruesome murders. We chugged coffee as we wove and connected seemingly disparate data items. We knew the clues to catch the killer were in the data. It was a matter of finding them and putting the story together so the ultimate target could be achieved. Though at first glance it may seem very different, it's strikingly similar to target marketing of customer data—but very much more pointed.

We got down to a shortlist of 230 people. We considered it impressive, given that Australia has 20 million citizens. But we were told the list was too long.

We worked harder and longer, and with extra data sources. Finally we cut the list to 32 POIs (persons of interest).

Including the killer, Ivan Milat.

Around the same time, an Englishman named Paul Onions informed police he had been hitchhiking near the Belanglo forest some three years before and had been assaulted by a driver who picked him up. Fortunately, he escaped after being fired at. Onions was able to identify Milat from the shortlist of suspects. Subsequently, Milat was convicted of the crimes and is serving seven consecutive life sentences.

The prosecution alleged in court that the victims were picked up, abducted, slain, and mutilated. One was decapitated. The head was never found. Another was shot in the head ten times.

Joanne Walters' blue T-shirt had at least 20 slash and stab holes in it. Many victims were stabbed so savagely that their bones were chipped. Some had been gagged or bound. Evidence “strongly suggested” a sexual element in six of the deaths, the Crown said.

Police raided a home on the outskirts of Sydney on May 22, 1994. They seized evidence and charged the 51-year-old road worker Ivan Robert Marko Milat, one of 14 children of Yugoslav-Australian parents, with all seven murders. Speculation has persisted that he may be responsible for up to 30 more disappearances.

The police did a mammoth job, and the public information was a huge help. But all that information desperately needed analysis. That is what we did: We narrowed a list of 20 million to a target of 1.