

# Account Validation – Combating the Stolen Perfect Identity



# Transactional Usage and Data Points

- ▶ **There is no silver bullet – no one item is definitive either positively or negatively. Take a holistic look at your system!**
- ▶ Email address
- ▶ Device Fingerprint
- ▶ Page View Patterns and Timeframes
- ▶ IP Addresses
- ▶ Commercially Available Tools

# Email Address

- ▶ Is the domain disposable?
  - ▶ <https://gist.github.com/adamloving/4401361>
- ▶ Is the username gibberish?
  - ▶ i.e.: `aaa.887.vvv.qwerty@maildomain.com`
- ▶ Is the username a repeatable pattern seen throughout more than one account?
  - ▶ i.e.: `group##@maildomain.com`
- ▶ Is the email address associated with multiple accounts?
- ▶ Is the email address associated with any social media accounts?

# Fingerprints

- ▶ A **device fingerprint** or **machine fingerprint** or **browser fingerprint** is information collected about a remote computing device for the purpose of identification. Fingerprints can be used to fully or partially identify individual users or devices even when cookies are turned off.
  - ▶ Not guaranteed to be diverse or stable
  - ▶ Is the device fingerprint associated with multiple accounts or purchases?

# Page View Patterns and Timeframes

- ▶ How many pages were loaded within a particular time frame?
- ▶ How much time was spent on each page?
- ▶ Is the pattern of page views the same or similar to other users of the site?

# IP Addresses

- ▶ IP Usage

- ▶ Is the same IP Address associated with more than one user account?
- ▶ Has the same account been accessed by multiple IP addresses?
  - ▶ What is the travel velocity of the IP address usage?

- ▶ Payments

- ▶ Is the account billing address within a reasonable geographic distance as the IP address that is associated with the account usage?

- ▶ Shipments

- ▶ Is the account shipping address within a reasonable geographic distance as the billing address?

# Commercially Available Tools

The screenshot displays the Sift Science web application interface. At the top left, the Sift Science logo is visible in a blue header. Below the logo, a navigation bar contains a location pin icon and the text "locations", along with a "view legend" link on the right. The main area is a map of the United States with several location markers: a yellow Wi-Fi icon in the West, a purple location pin in the South, and a green location pin in the Northeast. A hand cursor is positioned over the map. The bottom of the interface features a summary bar with the following items: "BILLING" with a green icon and the number "1", "SHIPPING" with a purple icon and the number "1", "IPs" with a yellow Wi-Fi icon and the number "1". The Google logo and map data attribution are also visible.



# Commercially Available Tools



100 6686617  
jfilm[redacted].com  
Last activity 7 days ago

OVERVIEW NETWORK ACTIVITY

## Users connected to 6686617

|  |    |                          |    |         |
|--|----|--------------------------|----|---------|
| Device fingerprint<br>reqmsjv[redacted]mhea5f9bv         | 89 | <input type="checkbox"/> | 99 | 5419801 |
| Cookie fingerprint<br>00f6ce[redacted]31b1ad03ffec734... | 87 | <input type="checkbox"/> | 99 | 6681706 |
| Digit-Normalized email address<br>jflme[redacted].com    | 2  | <input type="checkbox"/> | 98 | 6684892 |
| Normalized email address<br>jflm[redacted].com           | 2  | <input type="checkbox"/> | 99 | 1033842 |
|  |    | <input type="checkbox"/> | 98 | 1371881 |

Decision

### LEGACY

Looks Bad

Review

Looks OK

### PAYMENT ABUSE

Looks Bad

Looks OK