The Algorithmic Bug Bounty

Amit Elazari, Berkeley Law, CLTC Grantee
@amitelazari www.amitelazari.com
Bias in Criminal Risk Scores Is Mathematically Inevitable, Researchers Say

ProPublica's analysis of bias against black defendants in criminal risk scores has prompted research showing that the disparity can be addressed — if the algorithms focus on the fairness of outcomes.

by Julia Angwin and Jeff Larson, Dec. 30, 2016, 4:44 p.m. EST
Accountability

Openness

Algorithmic Fairness

Opacity

Interpretability

Transparency

Explainability
Transparency ≠ Accountability
Peeking Beneath the Hood of Uber

Le Chen
Northeastern University
Boston, MA
leonchen@cs.nju.edu

Alan Mislove
Northeastern University
Boston, MA
amislove@cs.nju.edu

Christo Wilson
Northeastern University
Boston, MA
cbw@cs.nju.edu

ABSTRACT

Recently, Uber has emerged as a leader in the “sharing economy”. Uber is a “ride-sharing” service that matches willing providers with willing customers. As open platforms, these websites are poised to unlock the productive potential of millions of people.

Uber has emerged as a leader in the sharing economy.
if ($race = NOT_CAUCASIAN) then { illegal_discrimination() };

Auditing Algorithms:
Research Methods for Detecting Discrimination on Internet Platforms

Christian Sandvig¹, Kevin Hamilton², Karrie Karahalios², & Cedric Langbort²
“You will not collect users' content or information, or otherwise access Facebook, using automated means (such as harvesting bots, robots, spiders, or scrapers) without our prior permission.”

“You will not provide any false personal information on Facebook, or create an account for anyone other than yourself without permission.”

“You will not create more than one personal account.”

Facebook, Terms of Service, https://www.facebook.com/terms.php
Defense Department invites you to "Hack the Pentagon"
Jordan Wiens
@psifertex

Wow! @united really paid out! Got a million miles for my bug bounty submissions! Very cool.

United Airlines bug bounty program

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/10/2015</td>
<td>United Bug Bounty</td>
<td></td>
</tr>
<tr>
<td>07/10/2015</td>
<td>United Bug Bounty</td>
<td>999,999</td>
</tr>
</tbody>
</table>
Consequences of Complying with This Policy

We will not pursue civil action or initiate a complaint to law enforcement for accidental, good faith violations of this policy. We consider activities conducted consistent with this policy to constitute "authorized" conduct under the Computer Fraud and Abuse Act. To the extent your activities are inconsistent with certain restrictions in our Acceptable Use Policy, we waive those restrictions for the limited purpose of permitting security research under this policy. We will not bring a DMCA claim against you for circumventing the technological measures we have used to protect the applications in scope.

If legal action is initiated by a third party against you and you have complied with Dropbox's bug bounty policy, Dropbox will take steps to make it known that your actions were conducted in compliance with this policy.
IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CHRISTIAN W. SANDVIG
2117 Washtenaw Avenue
Ann Arbor, MI 48104.

KYRATSO KARAHALIOS
1109 S. Douglas Avenue
Urbana, IL 61801.

ALAN MISLOVE
5 Grayfield Avenue
West Roxbury, MA 02132,

CHRISTOPHER WILSON
46 Symmes Street, No. 3
Roslindale, MA 02131,

FIRST LOOK MEDIA WORKS, INC.
114 Fifth Avenue, 18th Floor
New York, NY 10011,

Plaintiffs.

v.

LORETTA LYNCH, in her official capacity as
Attorney General of the United States
950 Pennsylvania Avenue, NW
Washington, DC 20530,

Defendant.
“Bias Bugs”: Fostering at-scale External Auditing

Legal Safe Harbors

Building Workforce and Educational Sources
We Need Bug Bounties for Bad Algorithms

In the age of algorithmic decision-making, we need to incentivize algorithmic auditors to become our new immune system.
The Algorithmic Bug Bounty

Amit Elazari, Berkeley Law, CLTC Grantee
@amitelazari www.amitelazari.com