# Carol drives a red car

## Beginning the conversation around ethically aware decision making

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# Hello!

## *I am Simon Aubury*

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# **Car** Insurance

**Congratulations on your new job**

.. which is to help us price risk

# What is Carole's premium?

Premium ($) = Risk (%) X  Value ($)

- Features
- Algorithms

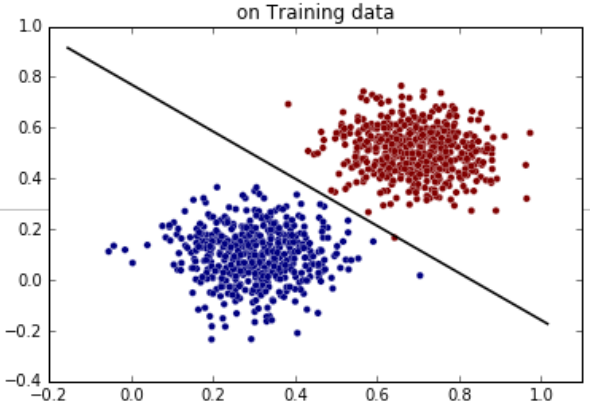
Easy to determine

A little bit harder to work  out

# What data for our calculation?

| Who | Gender | Car | Model | Colour | Email | Postcode | DOB | Risk |
|---|---|---|---|---|---|---|---|---|
| Alice | a | Holden | Barina | Blue | alice@hotmail.com | 2000 | 12/09/1990 | ? |
| Bob | b | BMW | 5s | White | bob@gmail.com | 2010 | 8/02/1972 | ? |
| Carole | c | Toyota | Carola | Red | carole@yahoo.com | 2115 | 9/05/1998 | ? |
| Derek | d | Honda | CRv | Brown | derek@aol.com | 2069 | 5/03/1985 | ? |

## Let's use **machines!**



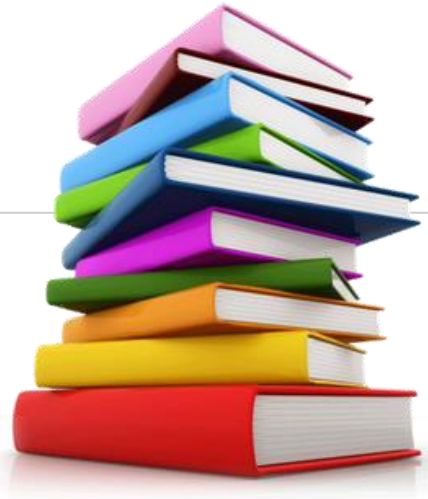

- DDD Insurance has 20 years of data
- We can use … algorithms!

1

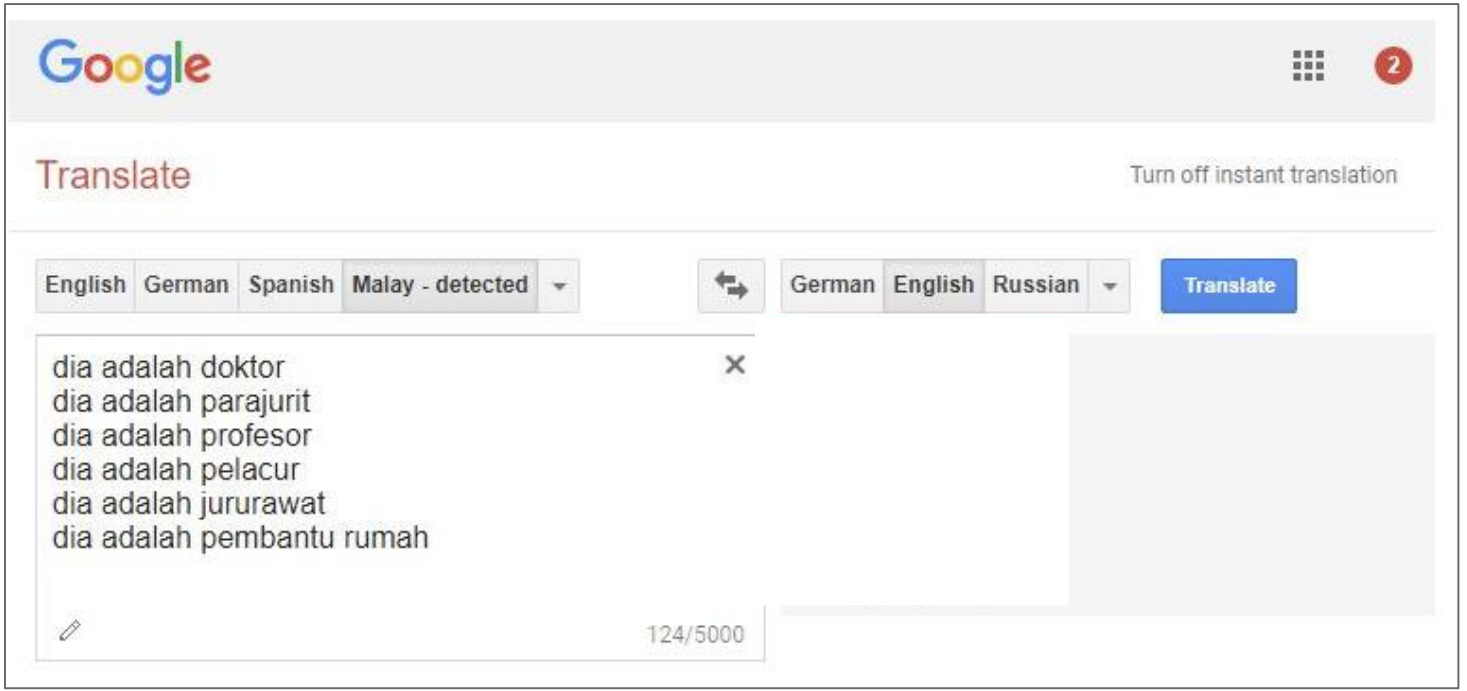
# Data != Truth

Don’t presume the desirability of AI

# Is there a bias?



# Is there a bias?



2

# Understand the limitations of the data

and remember to treat data as a liability

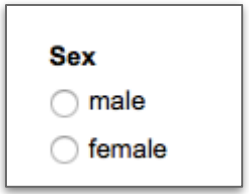
# Expectations of fairness

3

# Respect privacy

Be aware of relevant legislation

# Design the User Experience



# Is it even legal?

# Do you drive drunk?

- Do you answer “yes” to any of these?

**Short-list group**

- Have you ever been abroad?
- Have you ever used a taxi?
- Have you been using a plane this week?
- Did you wash your car this week?

**Long-list group**

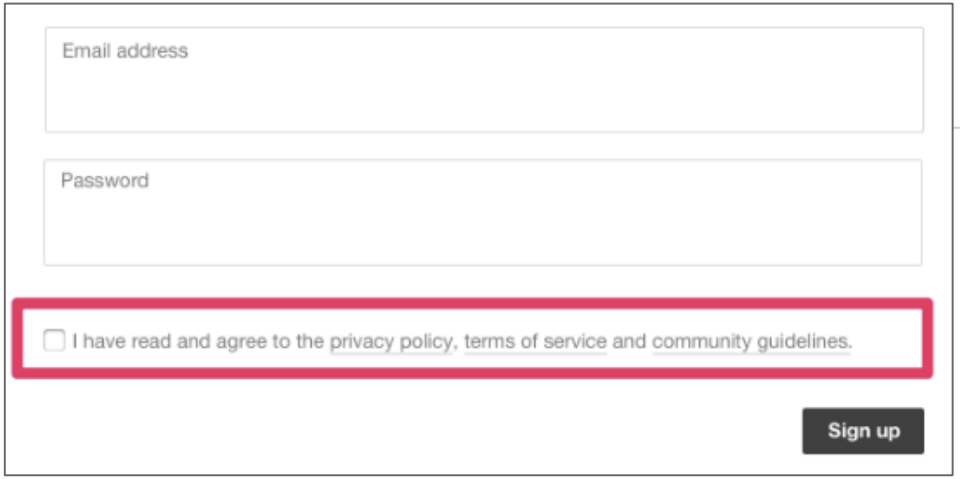
- Have you ever been abroad?
- Have you ever used a taxi?
- Have you been using a plane this week?
- Did you wash your car this week?
- Have you ever been driving a car although you had drunk too much alcohol?

4

# Be transparent & accountable

Consent framework and expectations of fairness

# Meaningful consent?



# Expectations of fairness

- example@**hotmail**.com
- example@**gmail**.com

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How your email address could increase your car insurance premium

DRIVERS are being warned that their car insurance premium could cost more depending on what type of email they use.

# Expectations of fairness

MONASH UNIVERSITY ACCIDENT RESEARCH CENTRE
REPORT DOCUMENTATION PAGE

| Report No. | Date | ISBN | Pages |
|---|---|---|---|
| 263 | May 2007 | 0 7326 2333 2 | 29 |

**Title:** An Investigation into the Relationship between Vehicle Colour and Crash Risk

**Author(s):** Stuart Newstead & Angelo D'Elia

**Sponsoring Organisation(s):** This project was funded as contract research by the following organisations: New South Wales Roads and Traffic Authority, NRMA Motoring and Services, Royal Automobile Club of Victoria, Transport Accident Commission, VicRoads.

**Abstract:**
This study has assessed the relationship between vehicle colour and crash risk through the analysis of real crash outcomes described in mass crash data reported to police in two Australian states. A stratified induced exposure study design was employed identifying vehicle to vehicle crashes and crashes involving unprotected road users as those having a risk dependent on vehicle colour whilst exposure was induced from single vehicle crash involvement. Analysis was stratified by vehicle type, light conditions and jurisdiction of crash.

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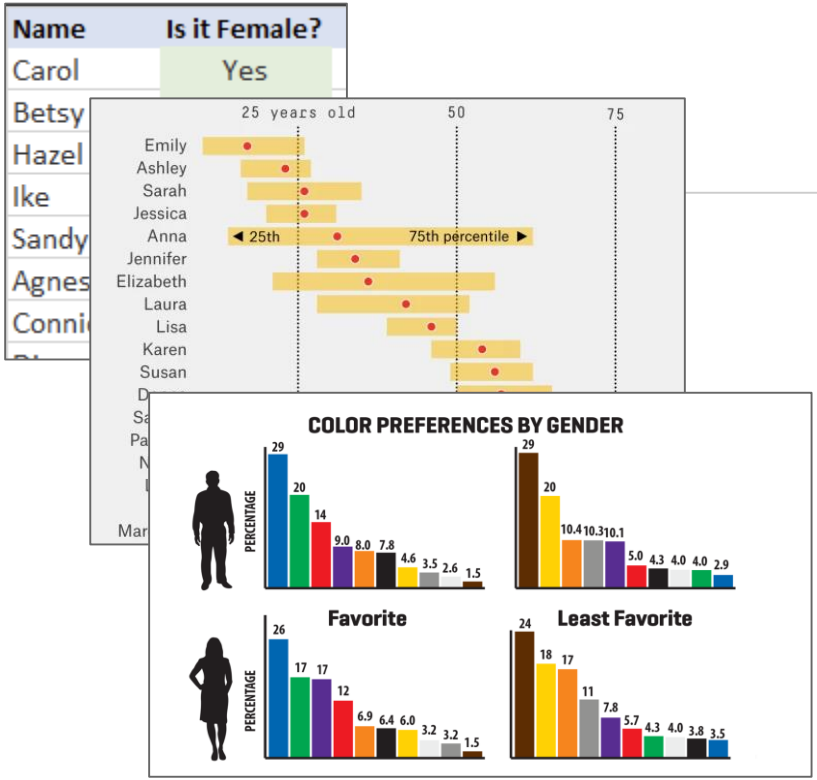
## Carol drives a red car

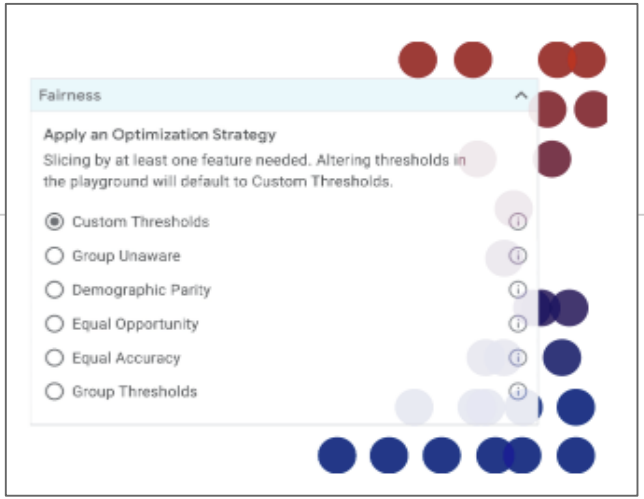
- Even if we don’t explicitly set out to capture the data; there’s implicit relationships in our feature set



# What now?

You don’t need invent it all

# Playing with AI fairness




- Google's ML diagnostic tool lets users try different types of fairness
- https://pair-code.github.io/what-if-tool/

## Ethical OS

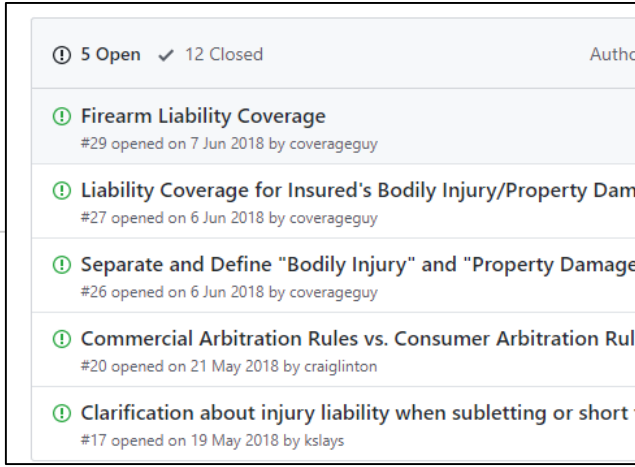
- Toolkit of
  - Checklists
  - Scenarios
  - Future-proofing strategies
- https://ethicalos.org/

## ODI Data Ethic Canvas

- A high-level framework for assessing the ethical implications of any project
- https://theodi.org

# Open and community sourced TOS

- Lemonade - open source insurance policy
  - https://github.com/lemonade-hq/policy-2.0



*“Those who have the privilege of creating products have the responsibility of defining ethical effects, as well as forecasting effects and ensuring that they pose no significant harm.”*

*Kat Zhou*

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# Thanks!

## *Any questions ?*

*Presentation template by SlidesCarnival*

This Presentation