

BEYOND SYNTAX: ON THE POWER AND POTENTIALITY OF DEEP OPEN SOURCE COMMUNITIES

Steph de Silva

BEYOND SYNTAX?

The value of intellectual diversity

A detailed, high-resolution image of a Raspberry Pi 3 Model B V1.2 circuit board. The board is populated with numerous electronic components, including integrated circuits, capacitors, resistors, and connectors. The Raspberry Pi logo is prominently displayed in the upper center. Text on the board includes "Raspberry Pi 3 Model B V1.2", "© Raspberry Pi 2015", "FCC ID: 2ABCB-RP132", "IC: 20953-RP132", and "HDMI". The board is densely packed with components, and the overall color scheme is a mix of metallic and dark tones.

NOT JUST A LANGUAGE?

ideas + ideology

"A RELATIVELY DIFFUSE SOCIAL NETWORK
HAVING SHARED IDENTITY, DISTINCTIVE
MEANINGS AROUND CERTAIN IDEAS, PRACTICE
AND OBJECTS, AND A SENSE OF
MARGINALIZATION FROM OR RESISTANCE TO
THE PERCEIVED CONVENTIONAL SOCIETY..."

Haenfler (2014)

DIFFUSE NETWORKS

The background is a dark, monochromatic image with a complex, organic texture, resembling marbled paper or a close-up of a rock surface. The textures are vertical and flowing, with various shades of dark grey and black. A solid white horizontal line is positioned near the bottom of the frame, spanning most of the width.

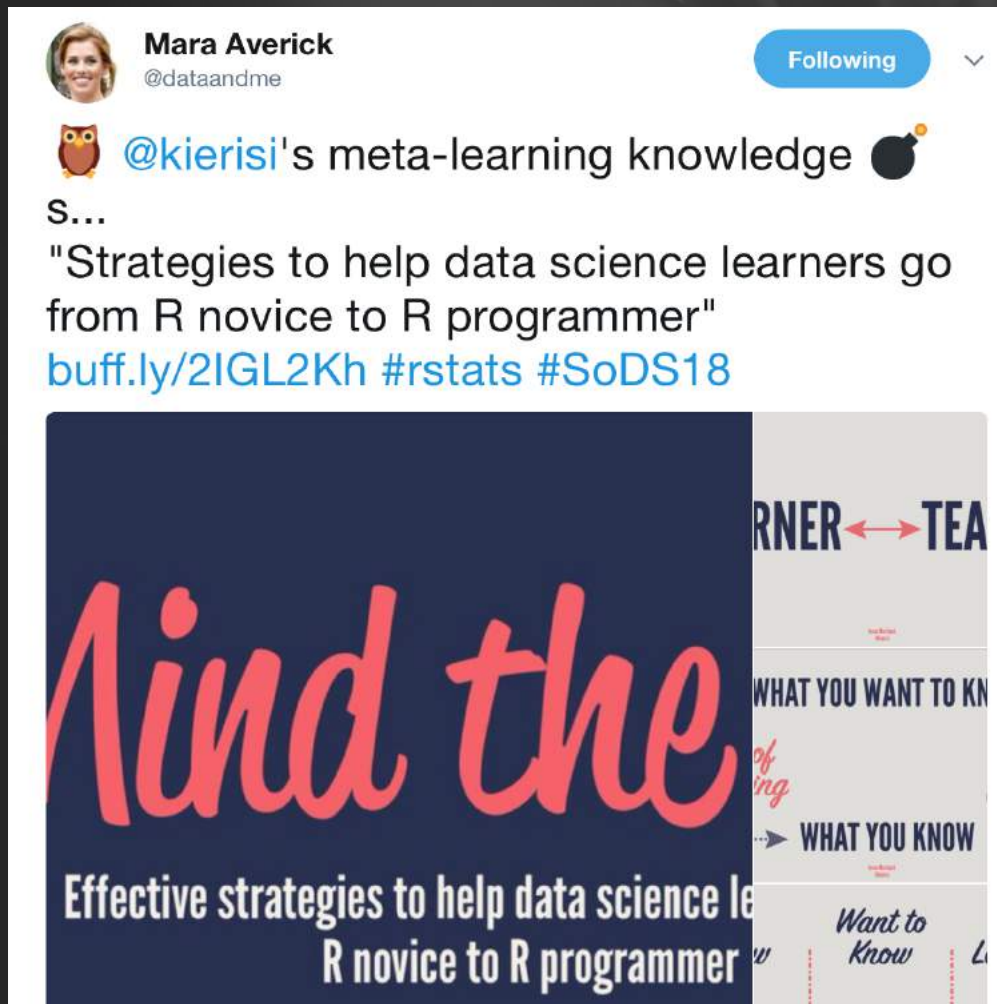
DIFFUSE NETWORKS SHARED IDENTITY

The background of the slide is a dark, textured surface with a marbled or stone-like pattern in shades of grey and black. The text is overlaid on this background.

DIFFUSE NETWORKS
SHARED IDENTITY
SHARED DISTINCT MEANINGS

DIFFUSE NETWORKS
SHARED IDENTITY
SHARED DISTINCT MEANINGS
RESISTANCE OR
MARGINALISATION?

SUBCULTURES HAVE THE
POWER TO CREATE **VALUE**



OPEN
SOURCE
HAS
VALUE

The background of the slide features a dark, monochromatic image. On the left, there are several interlocking mechanical gears of different sizes. On the right, there is a close-up, vertical view of a tree trunk with visible wood grain. The overall aesthetic is industrial and organic.


AN EVOLUTIONARY TOURNEY

Ideas evolve

SHARING CREATES **VALUE**

METHODOLOGIES

Many kinds of sharing, many kinds of value



METHODOLOGIES IDEOLOGIES

Many kinds of sharing, many kinds of value



METHODOLOGIES IDEOLOGIES STRATEGIES

Many kinds of sharing, many kinds of value



SUBCULTURES HAVE THE POTENTIAL TO CREATE **VALUES**

Ideas as well as ideologies



LOOKING FOR NUANCE

Data agency, data literacy

THE POTENTIAL TO CREATE CHANGE

Shaping and voicing a balanced viewpoint

ETHICS IN R

Both within and without

Ethical Machine Learning

A vignette designed to assist with spotting and preventing proxy bias.

Machine Learning systems often inherit biases against protected classes and historically disparaged groups via their training data [1]. Though some biases in features are straightforward to detect (ex: age, gender, race), others are not explicit and rely on subtle correlations in machine learning algorithms to understand. The incorporation of unintended bias into predictive models is called *proxy discrimination*.

Example of proxy bias in a bank's loan decision workflow.

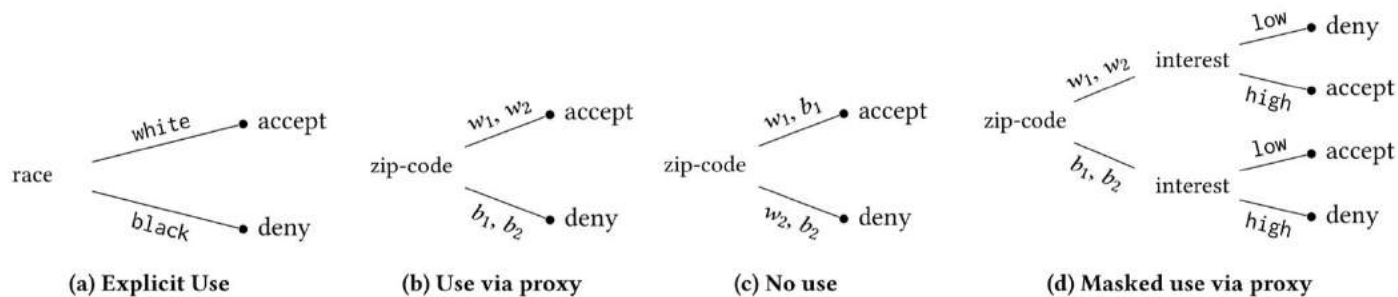


Figure 1: Examples of models (decision trees) used by a bank for accepting home loan applications. The bank uses race, zip-code, and customer's level of interest. Zip-codes w_1 and w_2 are predominantly white, whereas zip-codes b_1 and b_2 are predominantly black. Interest in loan, (high or low), is independent of race.

I Built Software



To kill People

(I didn't know it at the time)

- Caleb Thompson -
- @calebthompson

Dept. of Defense

project:
map



wifi
here

Find wifi hotspots

using algorithms:

R^2 gaussian estimation
- genetic algorithm

i worked on performance
enhancements ...
to kill people.

$$R^2 \equiv 1 - \frac{\sum \dots}{\sum \dots}$$
$$h = \left(\frac{45}{3n} \right) \dots$$

But...

DOES IT
FIND
PHONES??



I realized we were
finding wifi to
find phones to find people
to kill them.

Don't be
Distracted by ...
- the tech
- pay \$
- office perks ☹

I should have asked WHY.

by: Stephanie

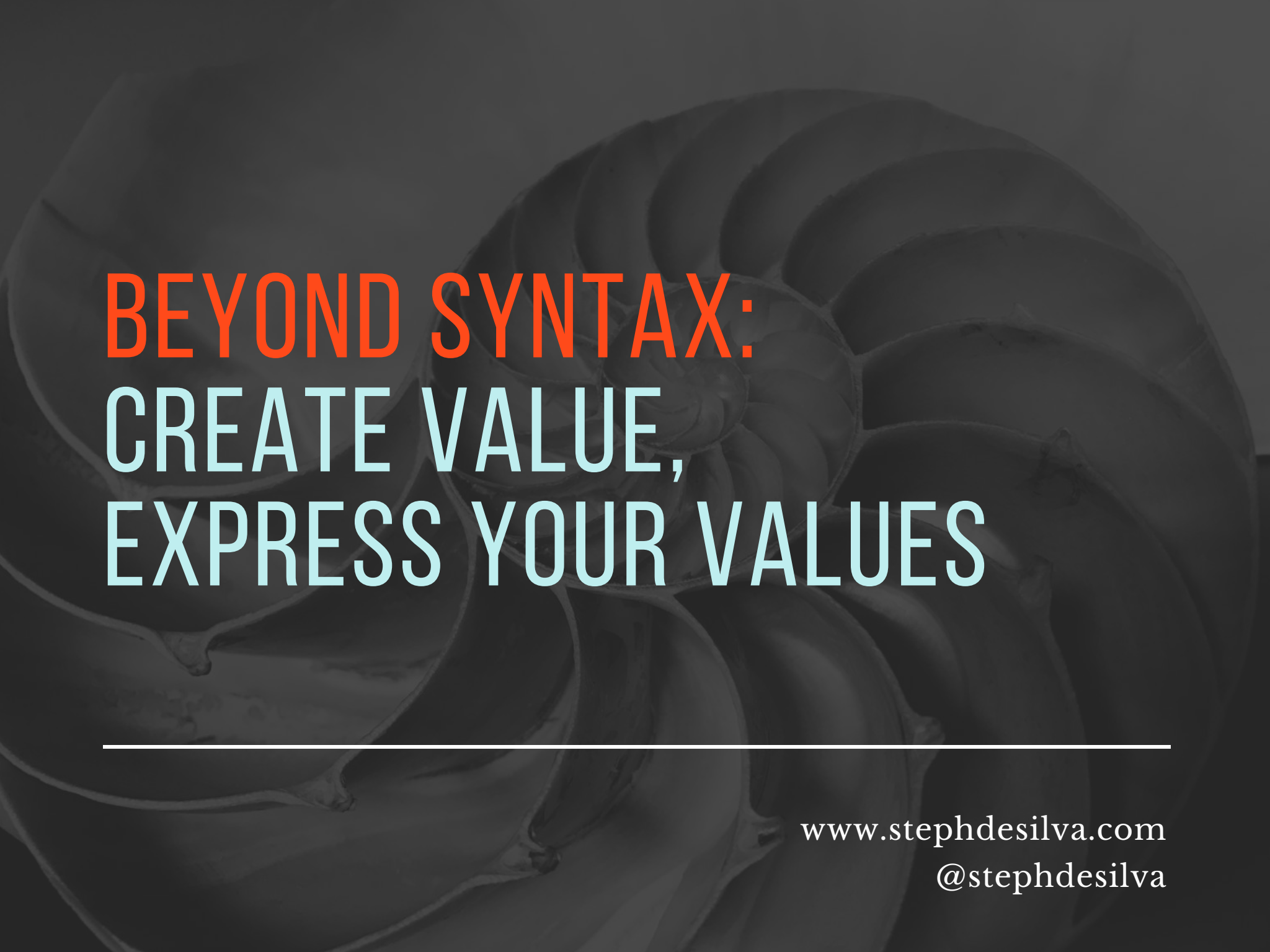
Thompson and Nemeth, 2018

R VALUES?

Open Source
Inclusivity + diversity
Reproducibility

IF WE DON'T CHOOSE OUR VALUES, WHO WILL?

Not an absence of a presence of values,
an absence of the presence of thought for them



BEYOND SYNTAX: CREATE VALUE, EXPRESS YOUR VALUES

www.stephdesilva.com
@stephdesilva

ACKNOWLEDGEMENTS: BETTER, TOGETHER

This piece benefited enormously from input, suggestions and challenges posed by Jesse Mostipak, Di Cook, Kim Fitter, John Ormerod and Charles Gray. Thank you all.

REFERENCES

Averick, M. (2018): *Twitter Post*,

<<https://twitter.com/dataandme/status/999834698997170178>>, accessed 18/05/27.

Bailey, P. (2018): Ethical Machine Learning: A vignette designed to assist with spotting and preventing proxy bias, <<https://github.com/dynamicwebpaige/runconf18>>, accessed 18/05/23.

Coleman, E.G., (2012): *Coding Freedom: The Ethics and Aesthetics of Hacking*, Princeton University Press, Princeton.

Haenfler, R. (2014): *Subcultures: The Basics*, Oxon, Routledge.

Keyes, O. (2016): "Ethics, scientific consent and OKCupid", Ironholds, <<https://ironholds.org/scientific-consent/>>, accessed 18/05/23.

Keyes, O. (2017): "Stop Mapping Names to Gender", Ironholds, <<https://ironholds.org/names-gender/>>, accessed 18/05/23.

Keys, O. (2017b): "Behaviour and Community in Open Science", Ironholds, <<https://ironholds.org/not-about-image/>>, accessed 18/05/23.

(Select)

REFERENCES

Leek, J., (2017): "Reproducibility and replicability is a glossy science now so watch out for the hype", *Simply Statistics*, <<https://simplystatistics.org/2017/03/02/rr-glossy/>>, accessed 2018/05/23.

Leek, J., (2018): "The value of re-analysis", *Simply Statistics*, <<https://simplystatistics.org/2012/12/18/the-value-of-re-analysis/>>, accessed 2018/05/23.

Leek, J., Peng, R.D., (2015): "Opinion: Reproducible research can still be wrong: Adopting a prevention approach", *Proceedings of the National Academy of Sciences of the United States of America*_ Volume 112, Number 6, p. 1645-1646, <<http://www.pnas.org/content/112/6/1645>>, accessed 18/05/23.

Thompson, C., Nemeth, S. (2018): *I Built Software to Kill People*, <<https://twitter.com/stephaniecodes/status/992419444810010625>>, accessed 18/05/23.