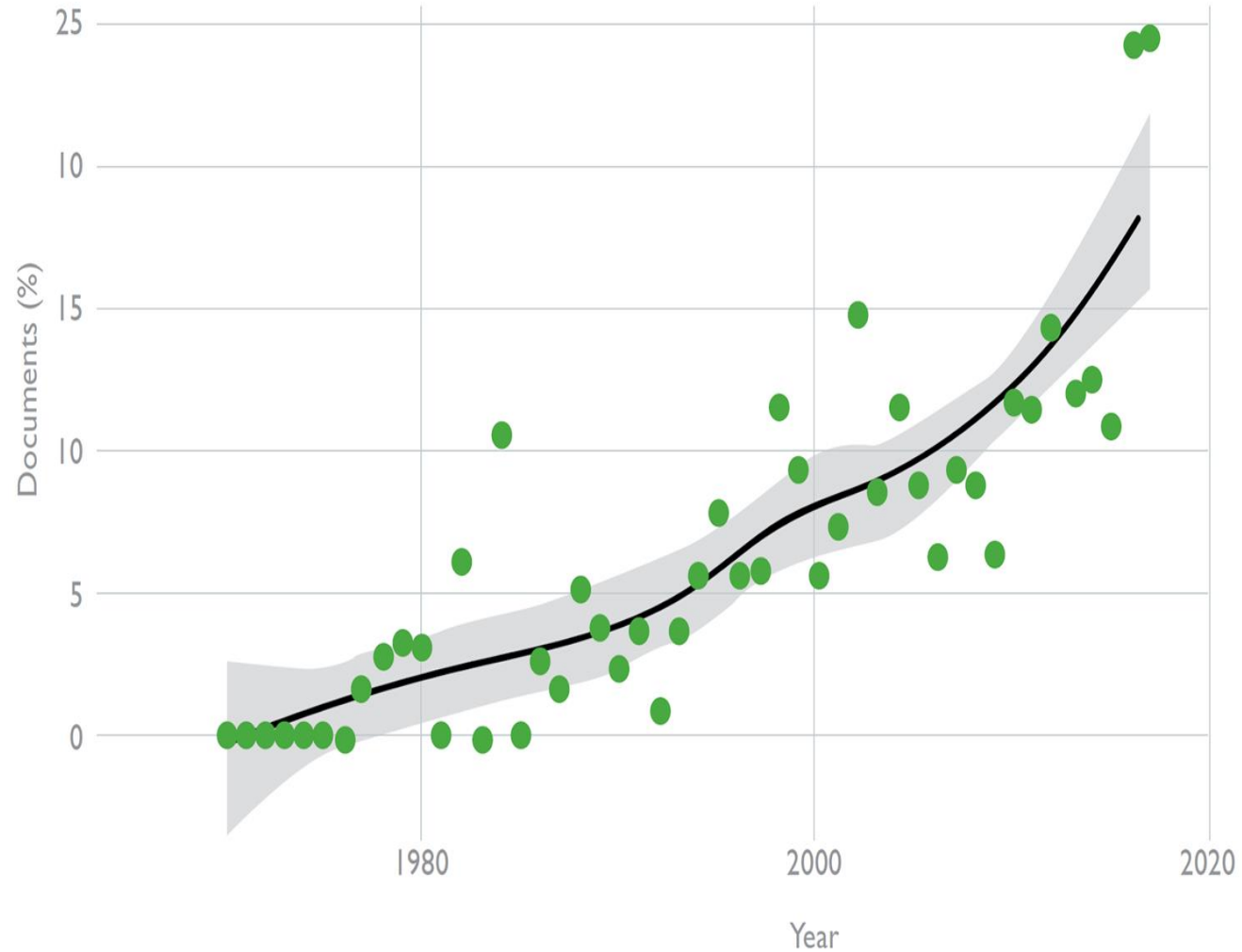


Tackling Algorithmic Bias

Roger Taylor - Centre for Data Ethics and Innovation (CDEI)

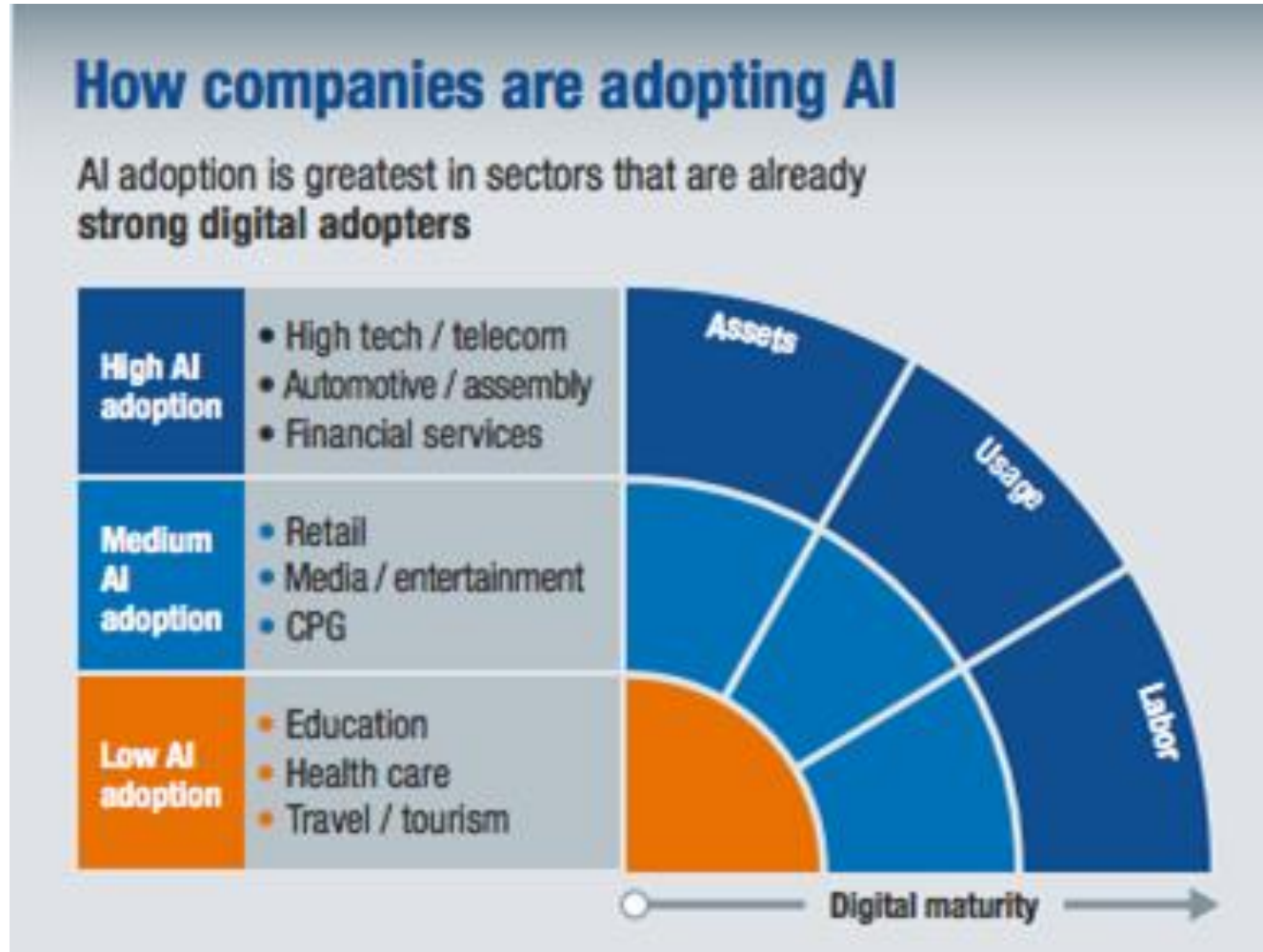
CDEI: An Independent Government Advisory body set up to identify how we can benefit from AI and algorithmic decision systems in ways that are consistent with our democratic values and social norms.

Ethics and Impact of AI



Nuffield Foundation and the Leverhulme Centre for the Future of Intelligence - 'Ethical and societal implications of algorithms, data, and artificial intelligence: a roadmap for research' (February 2019)

Use of AI and its impact

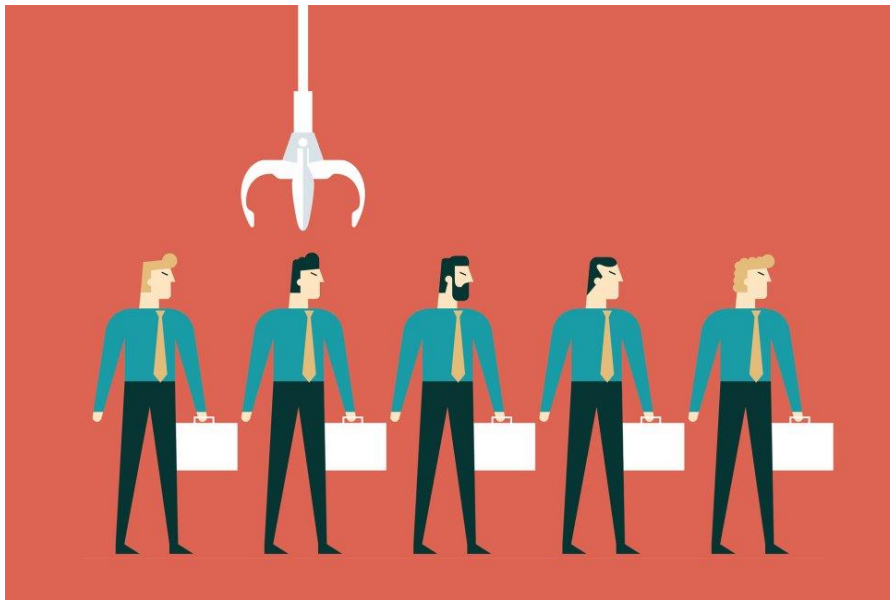


McKinsey Global Institute - Artificial Intelligence: The Next Digital Frontier (2017)

Review of Bias in Algorithmic Decision-making

Algorithms are used to support important decisions about people's lives, for example determining their credit rating or whether or not they get a job.

A recent Forbes study revealed that over half of HR organisations interviewed make use of AI in their functions.



Forbes/ Oracle Study: *AI and HR A Match Made in Many Companies* - 10 February 2019 - read [here](#)

Case Study: Bias in Bail and Sentencing Tool in the US

Case Study: COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) in the US



Case Study: Bias in Bail and Sentencing Tool in the US

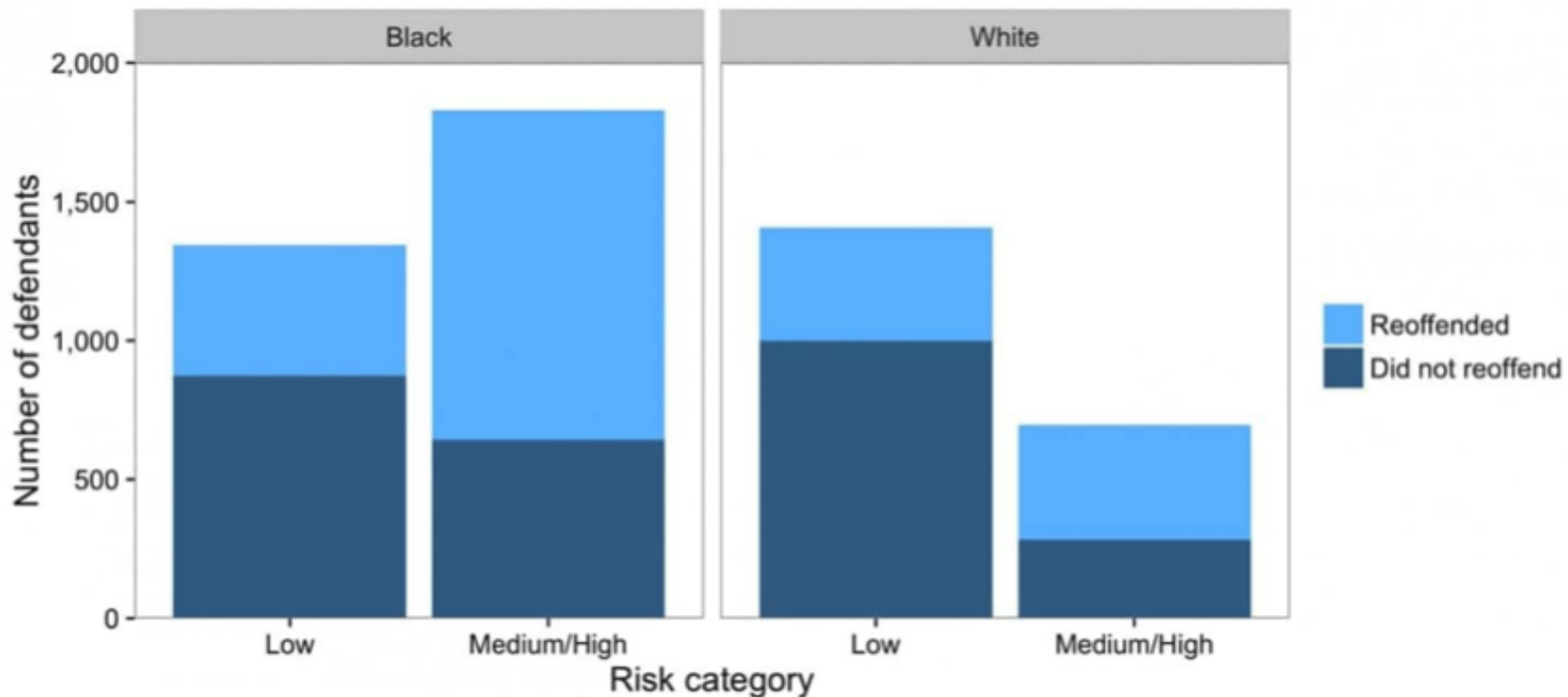
Pro-Publica criticisms of COMPAS:

- “The formula was particularly likely to falsely flag black defendants as future criminals, wrongly labeling them this way at almost twice the rate as white defendants.”
- “White defendants were mislabeled as low risk more often than black defendants.”

Pro-Publica – ‘What Algorithmic Injustice Looks Like in Real Life’, May 25 2016 -
<https://www.propublica.org/article/what-algorithmic-injustice-looks-like-in-real-life>

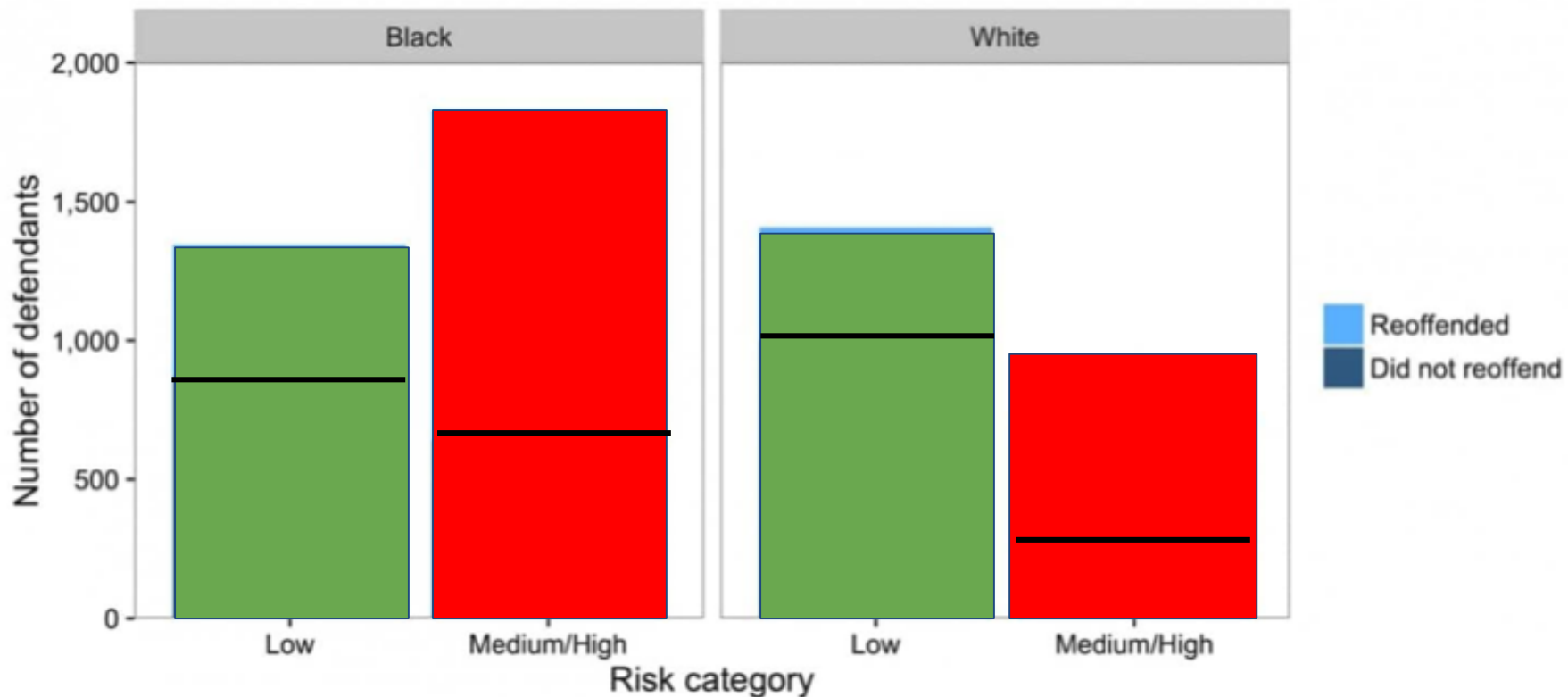
Equivant – ‘False Positives, False Negatives, and False Analyses’, September 2016 -
http://www.equivant.com/assets/img/content/FalsePositivesFalse_NegativesFalseAnalyses.pdf

Case Study: Bias in Bail and Sentencing Tool in the US



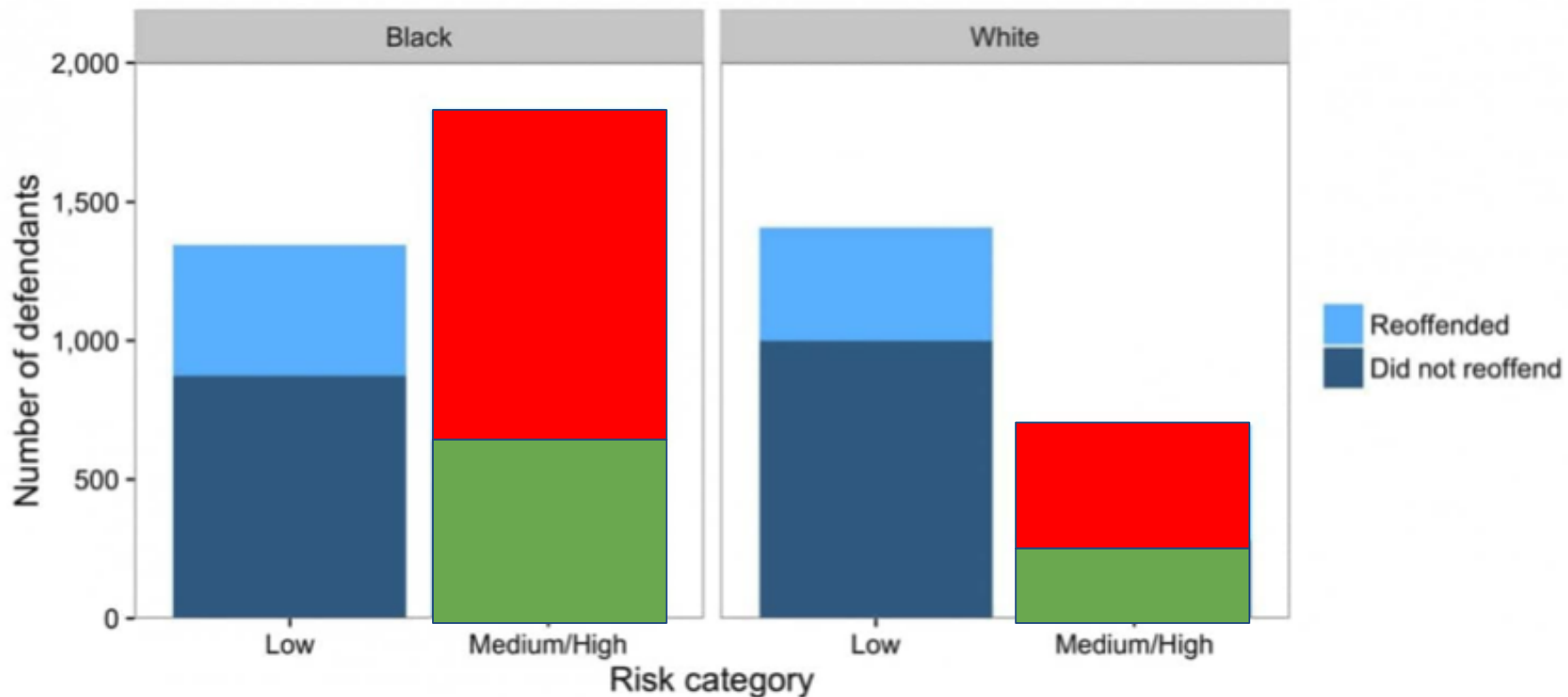
Graph from the Washington Post article - *A computer program used for bail and sentencing decisions was labeled biased against blacks. It's actually not that clear* - July 17, 2016 - read [here](#)

Case Study: Bias in Bail and Sentencing Tool in the US



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Case Study: Bias in Bail and Sentencing Tool in the US



Graph from the Washington Post article - *A computer program used for bail and sentencing decisions was labeled biased against blacks. It's actually not that clear* - July 17, 2016 - read [here](#)

The technical and social are inextricably linked

The use of automated decision making highlights the need to address aspects of how society operates.

- All data has a social aspect to its creation
- Products and models need to be understood statistically and socially
- The explanation and understanding of these systems cannot be limited to technical experts.



Centre for Data Ethics and Innovation (CDEI)

We will work with government, industry, regulators, academia, and the public to:

- Promote understanding of impacts, risks and opportunities of data-driven technology and AI
- Connect and convene key actors and civil society across sectors
- Equip regulators and policy-makers to meet common challenges.



Centre for
Data Ethics
and Innovation

Some considerations on best practice

- Support an open scientific debate about the accuracy and validity of decision systems
- Develop better mechanisms of public and professional engagement
- Build stronger mechanisms of corporate and professional governance.