Causation

Readings on causation as it applies to data science, and more specifically data science ethics. A primary focus of these readings is causal inference and socially sensitive attributes (e.g., race and gender).

Title	Citation
The Metaphysics of Causation (Stanford Encyclopedia of Philosophy)	Gallow (2022)
The Problem of Induction (Stanford Encyclopedia of Philosophy)	Henderson (2022)
Causation	Scheines (n.d.)
Causal Diagrams for Empirical Research	Pearl (1995)
Disparate Causes, Pt. I	Hu (2019)
Variation Semantics: When Counterfactuals in Explanations of Algorithmic Decisions are True	Hudetz & Crawford (2022)
Causal Discovery Algorithms: A Practical Guide	Malinsky & Danks (2018)
On the Explanatory Depth and Pragmatic Value of Coarse-Grained, Probabilistic, Causal Explanations	Kinney (2018)
Fairness in Decision-making — the Causal Explanation Formula	Zhang & Bareinboim (2018)
Evaluations of Causal Claims Reflect a Trade-Off Between Informativeness and Compression	Kinney & Lombrozo (2022)
The Use and Misuse of Counterfactuals in Ethical Machine Learning	Kasirzadeh & Smart (2021)
Eddie Murphy and the Dangers of Counterfactual Causal Thinking About Detecting Racial Discrimination	Kohler-Hausmann (2017)
"But What Are You *Really*?": The Metaphysics of Race	Mills (1998)
What is "Race" in Algorithmic Discrimination on the Basis of Race?	Hu (Forthcoming)

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Henderson, L. (2022). The Problem of Induction. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford encyclopedia of philosophy* (Winter 2022). https://plato.stanford.edu/archives/win2022/entries/induction-problem/; Metaphysics Research Lab, Stanford University.

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Kasirzadeh, A., & Smart, A. (2021). The use and misuse of counterfactuals in ethical machine learning. *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 228–236. New York, NY, USA: Association for Computing Machinery. https://doi.org/10.1145/3442188.3445886

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Kohler-Hausmann, I. (2017). The dangers of counterfactual causal thinking about detecting racial discrimination. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3050650

Malinsky, D., & Danks, D. (2018). Causal discovery algorithms: A practical guide. *Philosophy Compass*, *13*(1), e12470. https://doi.org/10.1111/phc3.12470

Mills, C. W. (1998). "But what are you *really*?": The metaphysics of race. In C. W. Mills (Ed.), *Blackness visible: Essays on philosophy and race* (pp. 41–66). Cornell University Press.

Pearl, J. (1995). Causal diagrams for empirical research. *Biometrika*, *82*, 669–688. Retrieved from https://api.semanticscholar.org/CorpusID:10023329

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