



## **Revolutionary Mathematics**

*Artificial Intelligence, Statistics, and the Logic of Capitalism*

By Justin Joque

**ISBN 9781788734004 • PB • 240pp • Pub: 2022**

**Publisher: Verso Books**

**Original Price: £16.99**

**Feelbooks Special Edition: Rs. 1695**



“Revolutionary Mathematics critically explores the mathematical systems behind the machinery of abstraction that drives capitalism today—in particular, the machine learning algorithms at the heart of the global platform economy. In linking Marxist theories of real abstraction to mathematical paradigms, such as Bayesian statistics, this challenging work equips critical thought with the tools to contest the hidden codes that run our world.”

– *Alex Williams, University of East Anglia*

### **The rise of AI and algorithms refiguring contemporary capitalism**

Our finances, politics, media, opportunities, information, shopping and knowledge production are mediated through algorithms and their statistical approaches to knowledge. Increasingly, these methods form the organisational backbone of contemporary capitalism. Revolutionary Mathematics traces the revolution in statistics and probability that has quietly underwritten the explosion of machine learning, big data and predictive algorithms that now decide many aspects of our lives. Exploring shifts in the philosophical understanding of probability in the late twentieth century, Joque shows how this was not merely a technical change but a wholesale philosophical transformation in the production of knowledge and the extraction of value.

This book provides a new and unique perspective on the dangers of allowing artificial intelligence and big data to manage society. It is essential reading for those who want to understand the underlying ideological and philosophical changes that have fuelled the rise of algorithms and convinced so many to blindly trust their outputs, reshaping our current political and economic situation.

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#### **About the Author**

**Justin Joque** researches philosophy, technology and media and is the visualization librarian at the University of Michigan.

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