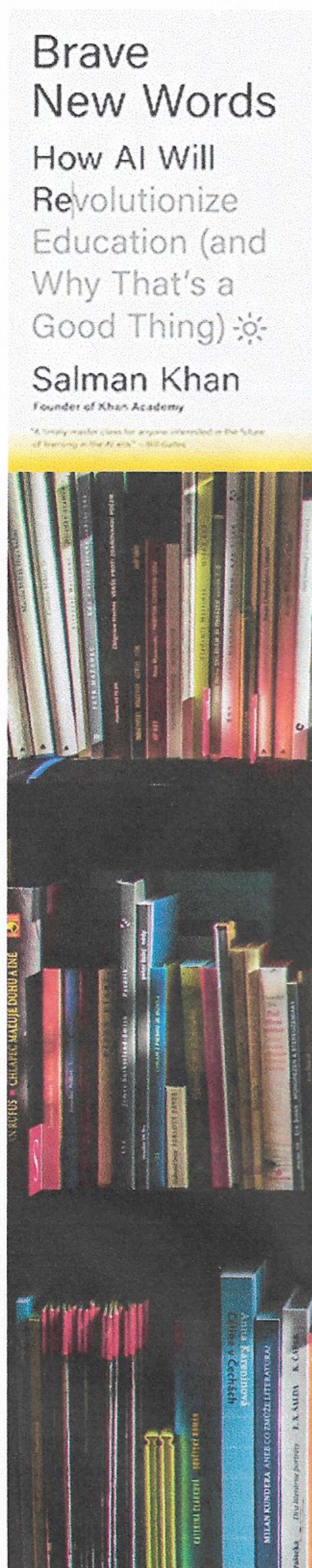


The Cyber Library

Reviewing the Works of Salman Khan, and Marc Peter Deisenroth, A. Aldo Faisal, Cheng Soon Ong

By: William J. (Jay) Carson, ISSA Member Colorado Springs



Cybersecurity: Politics, Governance and Conflict in Cyberspace. Brave New Words: How AI Will Revolutionize Education (and Why That's A Good Thing).

by Khan, Salman. Viking, (2024).

Sound Bite: Optimism on AI as a solution for some public education limitations.

Opinion on Primary Audience: Absolutely everyone! I especially recommend this book to any 'teacher.'

Salman (Sal) Khan will restore any loss of optimism you may have about the effect of artificial intelligence on public education. If a student falls behind, AI can offer a solution through individual 'mastery' tutoring. While you might get a hint of Khan's promotion of his non-profit, I am willing to overlook that aspect.

The Authors:

Sal Khan has a BS and MS degrees (Electrical Engineering and Computer Science) from MIT, as well as a BS in Mathematics. His experience in AI as well as education is impressive. He has indeed worked with AI leaders.

The Metadata:

A 2024 publishing date! The online ordering cost including shipping is about \$20. The hardback copy is about 320 pages. My local public library system has five copies, but you will have to wait depending on the holds.

This book is a quick read due to its style, but that does not make it less important. I took a one-page sample of the text to analyze. Using a Wikipedia article about the Flesch-Kincaid Readability Test, the readability is high school level. The sample had 0% passive voice, so it is meant to be enjoyably readable. This article is 0% passive voice.

Table of Contents: [Including Reviewer notes]

- Chapter 1: Rise of the Tutor [Reviewer note: what GPT-4 can do, and the future potential of AI]
- Chapter 2: Giving Voice to the Social Sciences [Reviewer note: yes, social science teachers must adapt]
- Chapter 3: Empowering the Next Innovators [Reviewer note: AI augments parental authority]
- Chapter 4: Better Together [Reviewer note: AI helps test anxiety]
- Chapter 5: Keeping Kids Safe [Reviewer note: AI helps]
- Chapter 6: Teaching in the Age of AI [Reviewer note: ways to help teachers teach, and reduce teacher workload]
- Chapter 7: The Global Classroom [Reviewer note: solving the educationally neglected]
- Chapter 8: AI, Assessments, and Admissions [Reviewer note: helping achieve equity]
- Chapter 9: Work and What Comes Next [Reviewer note: specifics for a brighter future]

Disclaimer: These are the author's subjective opinions, and do not necessarily reflect the opinions of any organization or other individual. A human prepared this article with assistance from Microsoft Editor and Grammarly.

Mathematics for Machine Learning

by Deisenroth, Marc Peter, A. Aldo Faisal, and Cheng Soon Ong.
Cambridge University Press, (v.8 2023).

Sound Bite: Artificial Intelligence - You must do the math!

Opinion on Primary Audience: College textbook (or at least background) for aspiring AI-practitioners, or those to know want to really understand AI!

You need at least an appreciation of the math behind AI if you are an AI leader. You may read the book and not fully understand all the math (join the club), but you at least will know it exists. Please note this is a two-part book. The first part is the math fundamentals, the second part really gets into what you need to function in the machine-learning world.

The Author: Together these authors have superb credentials of education and collectively decades of experience. Marc Peter Deisenroth is Director of Science and Innovation at the Alan Turing Institute and Google DeepMind Chair of Machine Learning and Artificial Intelligence. His PhD in Machine Learning (2009) is from Karlsruhe Institute of Technology. A. Aldo Faisal is Professor in AI & Neuroscience at Imperial College London. His PhD in Neuroscience (2004) is from the University of Cambridge. Cheng Soon Ong is Associate Science Director at Australia's Commonwealth Science and Industrial Research Organization (CSIRO). His PhD in Computer Science (2005) is from The Australian National University.

The Metadata: A 2023 (ver. 8) publishing date! You can get a copy by online ordering for a little under \$50, including shipping. The paperback copy is about 360 pages. My local public library system has no copies. With a one-page sample of the text to analyze, it is upper college-level, about 33% passive voice. This article is 0% passive voice for comparison. The book does have a website.

Table of Contents: [Including Reviewer notes]

Chapter 1: Motivation [worth the read]

Chapter 2: Linear Algebra [Reviewer note: lots of symbology and definitions here – like vocabulary in a new language]

Chapter 3: Analytic Geometry

Chapter 4: Matrix Decomposition [Reviewer note: (in chapters 2-5) absolute mastery of matrix manipulation fundamentals is necessary to follow the authors' teaching]

Chapter 5: Vector Calculus

Chapter 6: Probability and Distribution

Chapter 7: Continuous Optimization

Chapter 8: When Models Meet Data [Reviewer note: part II begins]

Chapter 9: Linear Regression [Reviewer note: chapter 6 'fluency' will be needed]

Chapter 10: Dimensionality Reduction with Principal Component Analysis

Chapter 11: Density Estimation with Gaussian Mixture Models

Chapter 12: Classification with Support Vector Machines

Happy Reading!

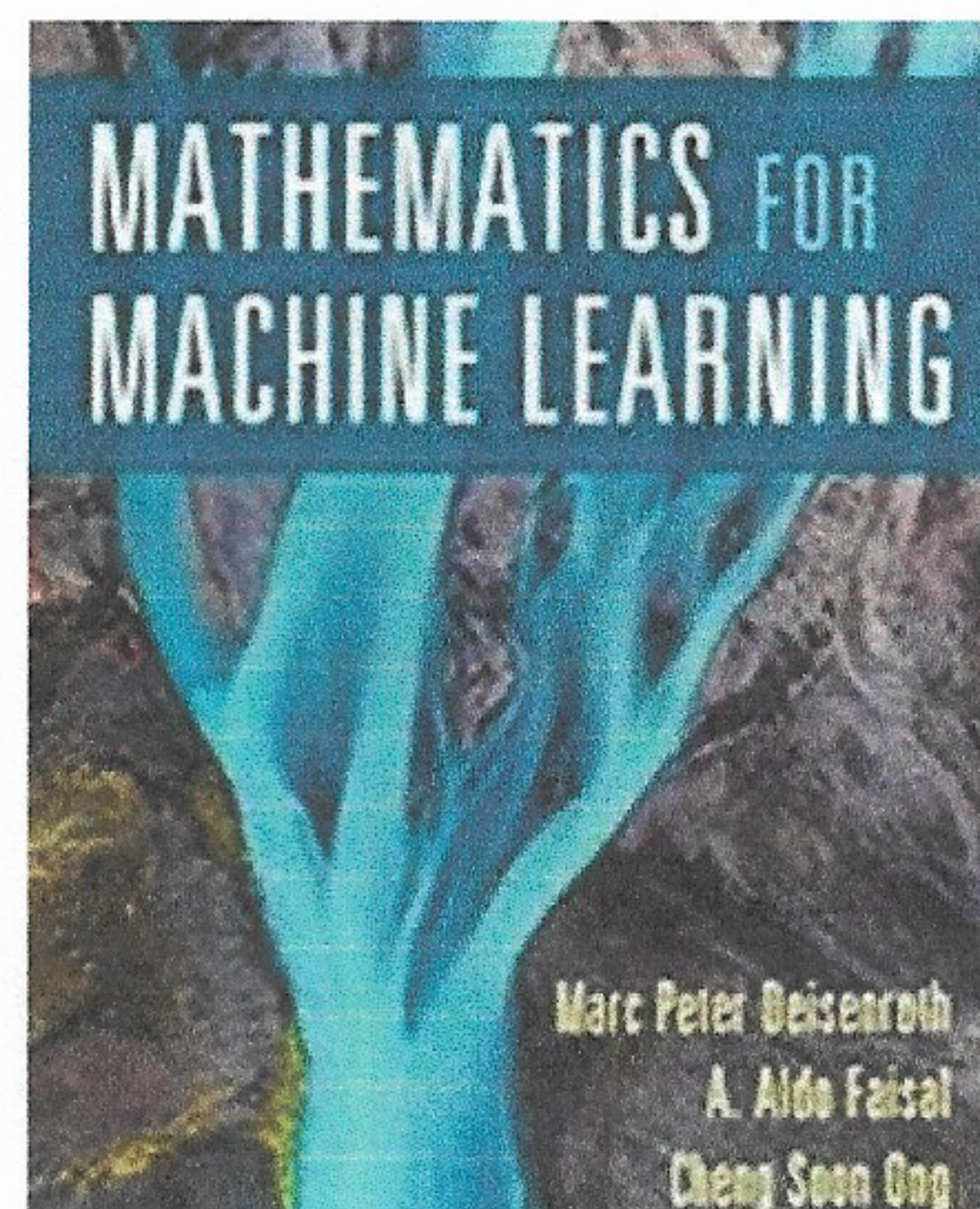
PS: If you have a book you want me to review, please use the email address in my bio to let me know! And so far, no one has!

Next Month:

- Harari, Yuval Noah. Nexus: A Brief History of Information Networks from the Stone Age to AI. (2024).
- Narayanan, Arvind and Sayash Kapoor. AI Snake Oil: What Artificial Intelligence Can Do, What It Can't, and How to Tell the Difference, (2024), or Molick, Ethan. Co-Intelligence: Living and Working with AI (2024).

Additional sources used in the article:

1. https://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid_readability_tests
2. LinkedIn profiles for authors listed, where available.
3. https://en.wikipedia.org/wiki/Sal_Khan



About the Author

William J. (Jay) Carson, ISSA Senior Member, ISSA 2020 Volunteer of the Year, and past ISSA-Colorado Springs Executive Vice President. He is the part-time 'Cyber Librarian' of Semper Sec, LLC. Holding Security+ and CIPP/E certifications, he is a former high school math/science teacher, civil servant, contractor, and retired USAF Lieutenant Colonel. Reach him at Runningjay51@gmail.com.



Disclaimer: These are the author's subjective opinions, and do not necessarily reflect the opinions of any organization or other individual. A human prepared this article with assistance from Microsoft Editor and Grammarly.