THE MODEL THINKER What You Need to Know to Make Data Work for You

Description

by Scott E. Page. Published by Basic Books, 2018

Tweet

Book review by Carol Wells a?? Page proposes a a?? many-model paradigm, a? where we apply several mathematical models to a single problem. The idea is to replicate a?? the wisdom of the crowda? which, in groups like juries, has shown us that input from many sources tends to be more accurate, complete, and nuanced than input from a single sourcea?

Contents:

Chapter 1 â?? The Many-Model Thinker

Chapter 2 a?? Why Model?

Chapter 3 a?? The Science of Many Models

Chapter 4 â?? Modeling Human Actors

Chapter 5 a?? Normal Distributions: The Bell Curve

Chapter 6 a?? Power-Law Distributions: Long Tails

Chapter 7 â?? Linear Models

Chapter 8 a?? Concavity and Convexity

Chapter 9 a?? Models of Value and Power

Chapter 10 â?? Network Models

Chapter 11 a?? Broadcast, Diffusion, and Contagion

Chapter 12 a?? Entropy: Modeling Uncertainty

Chapter 13 â?? Random Walks

Chapter 14 â?? Path Dependence

Chapter 15 â?? Local Interaction Models

Chapter 16 a?? Lyapunov Functions and Equilibria

Chapter 17 a?? Markov Models

Chapter 18 â?? Systems Dynamics Models

Chapter 19 a?? Threshold Models with Feedbacks

Chapter 20 a?? Spatial and Hedonic Choice

Chapter 21 â?? Game Theory Models Times Three

Chapter 22 a?? Models of Cooperation

Chapter 23 â?? Collective Action Problems

Chapter 24 â?? Mechanism Design

Chapter 25 â?? Signaling Models

Chapter 26 a?? Models of Learning

Chapter 27 â?? Multi-Armed Bandit Problems

Chapter 28 â?? Rugged-Landscape Models

Chapter 29 a?? Opioids, Inequality, and Humility

From his Coursera course, which the book builds on: a??We live in a complex world with diverse people, firms, and governments whose behaviors aggregate to produce novel, unexpected phenomena. We see political uprisings, market crashes, and a never-ending array of social trends. How do we make sense of it? Models. Evidence shows that people who think with models consistently outperform those who donâ??t. And, moreover, people who think with lots of models outperform people who use only one. Why do models make us better thinkers? Models help us to better organize information â?? to make sense of that fire hose or hairball of data (choose your metaphor) available on the Internet. Models improve our abilities to make accurate forecasts. They help us make better decisions and adopt more effective strategies. They even can improve our ability to design institutions and procedures. In this class, I present a starter kit of models: I start with models of tipping points. I move on to cover models explain the wisdom of crowds, models that show why some countries are rich and some are poor, and models that help unpack the strategic decisions of firm and politicians. The models covered in this class provide a foundation for future social science classes, whether they be in economics, political science, business, or sociology. Mastering this material will give you a huge leg up in advanced courses. They also help you in life. Hereâ??s how the course will work. For each model, I present a short, easily digestible overview lecture. Then, lâ??II dig deeper. lâ??II go into the technical details of the model. Those technical lectures wonâ??t require calculus but be prepared for some algebra. For all the lectures, lâ?? Il offer some questions and weâ?? Il have quizzes and even a final exam. If you decide to do the deep dive, and take all the quizzes and the exam, youâ??ll receive a Course Certificate. If you just decide to follow along for the introductory lectures to gain some exposure thatâ??s fine too. Itâ??s all free. And ita??s all here to help make you a better thinker!a?•

Some of his online videos on Coursera

- Prediction
- Linear models
- Diversity prediction theorem
- The many model thinker

Other videos

- Scott Page â?? Bees Do It: Can Humans? Realizing Our Collective Intelligence â?? 04/14/18
- Scott Page on leveraging diversity, 2010

Category

1. Books

Date 29/12/2025 Date Created 31/03/2019 Author admin