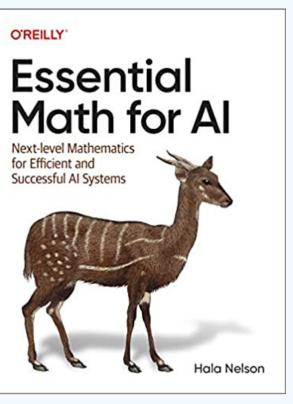
Essential Math for Al





Intelligence

Computing

Perceiving

Vision Hearing Measuring **Understanding**

Controlling Robotics

Becoming Aware

Memory

Database

Communicating

Imagining

Simulating Generating

Navigating

Empathizing

Language Reading Writing Talking

Creating

Tools
Automating

Reasoning

Logical Causal Ethical

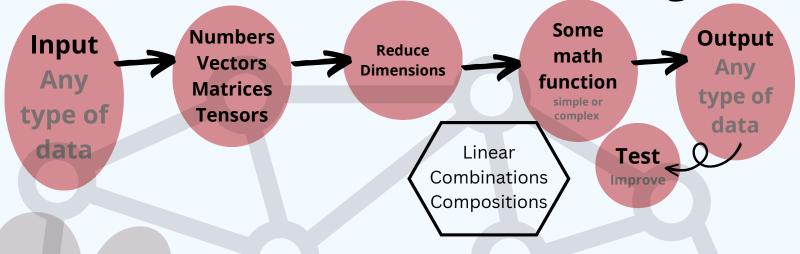
Transferring knowledge

Improving

Learning Reinforcing

Reproducing

Mathematical Models for Intelligence



Maximize Reward

Deterministic Models

Training function

Minimize loss

Probabilistic Models

Joint probability distribution

Maximize likelihood