

Better: 2-D Coordinate System





Beginner

Advanced

Technical

Conceptual

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NICK BOSTROM

SUPERINTELLIGENCE

Paths, Dangers, Strategies



DEEP LEARNING with Python

François Chollet



grokking

Deep Learning

Andrew NG Tseoh



$[-5, 2]$

[5, 4]

$[-3, -1]$

[2, -2]

"Brilliant.... Exhilarating."

—RICHARD DAWKINS, from the foreword

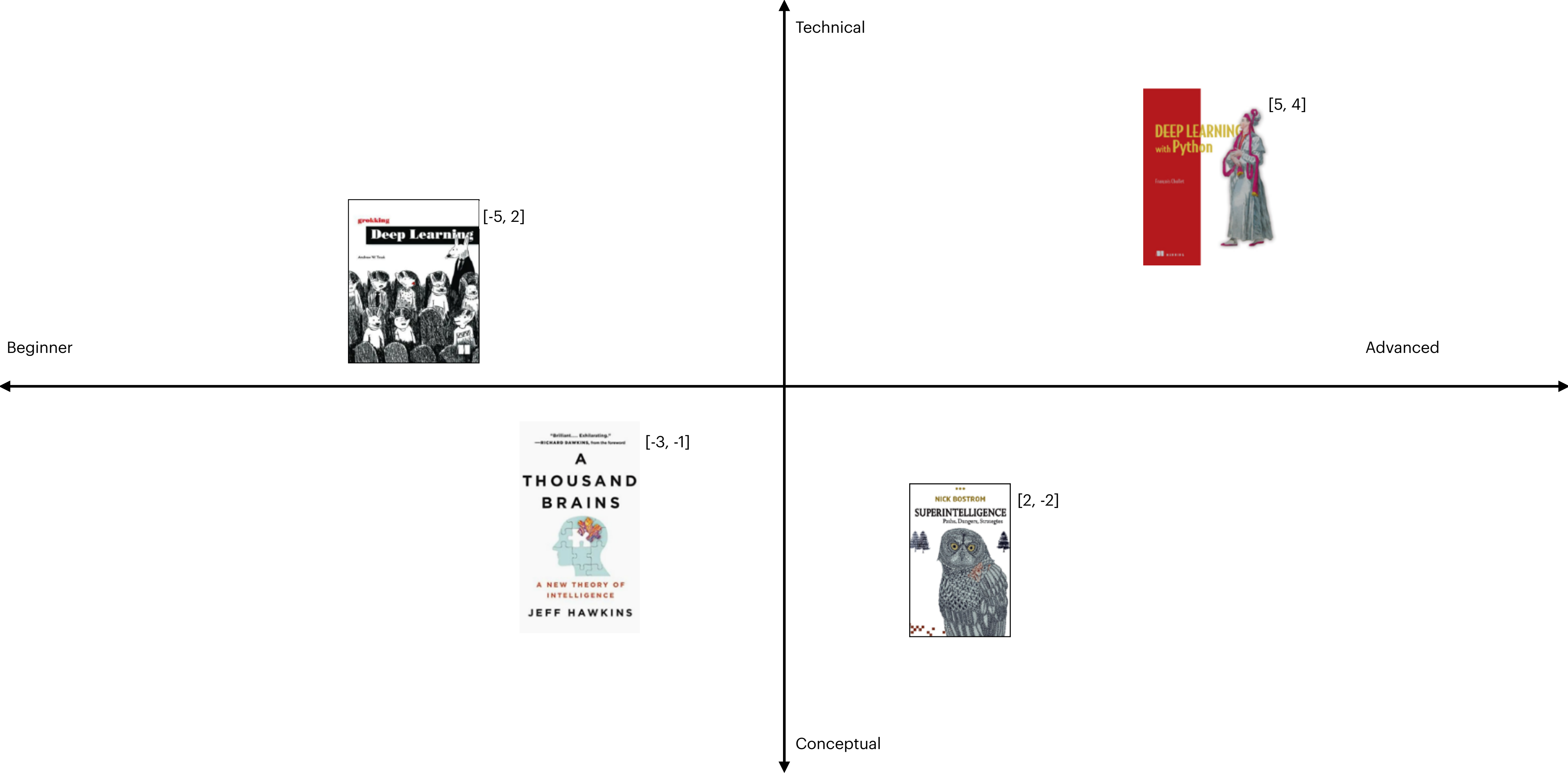
A THOUSAND BRAINS



A NEW THEORY OF
INTELLIGENCE

JEFF HAWKINS

Better: 2-D Coordinate System



Even better: use N-dimensions

- **Neural networks choose the dimensions for us.**
- **Based on the labelled training data (think “cat” vs. “dog”), neural networks are able to “embed” objects (words, images, video, audio) into N-dimensional space.**
- **We can represent embeddings as vectors:**
 - **[a0, a1, a2, ..., aN]**
- **Similar objects get embedded in similar locations,**
- **This gives us the ability to do *semantic search*, i.e., find things that have similar meaning.**