

What Is Deep Learning?

Deep Learning in Everyday Life



How can I help you today?



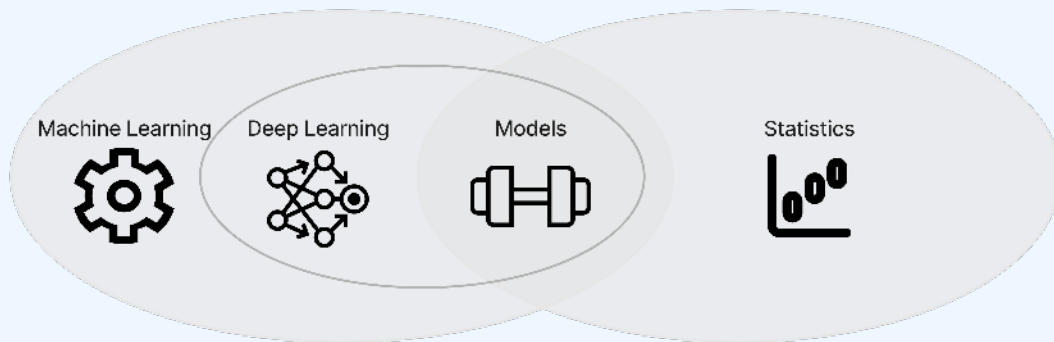
**Siri, text Rigo,
'I'm on my way'**

What Is Deep Learning?

Short answer:

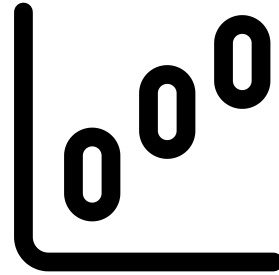
Machine learning that works

Longer answer:

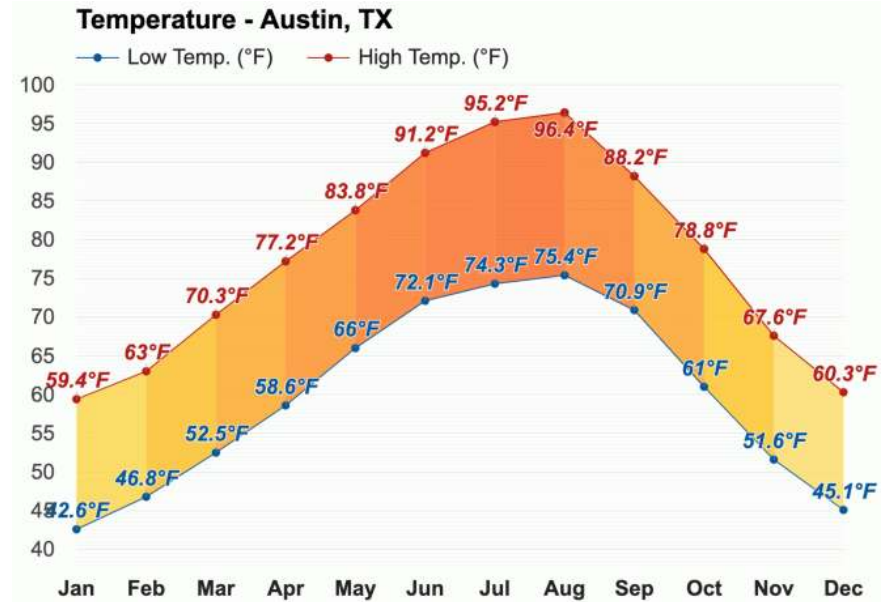


Statistics

- Study of **data**
- Goal: understand the properties of data
- Defines the fundamental mathematical language



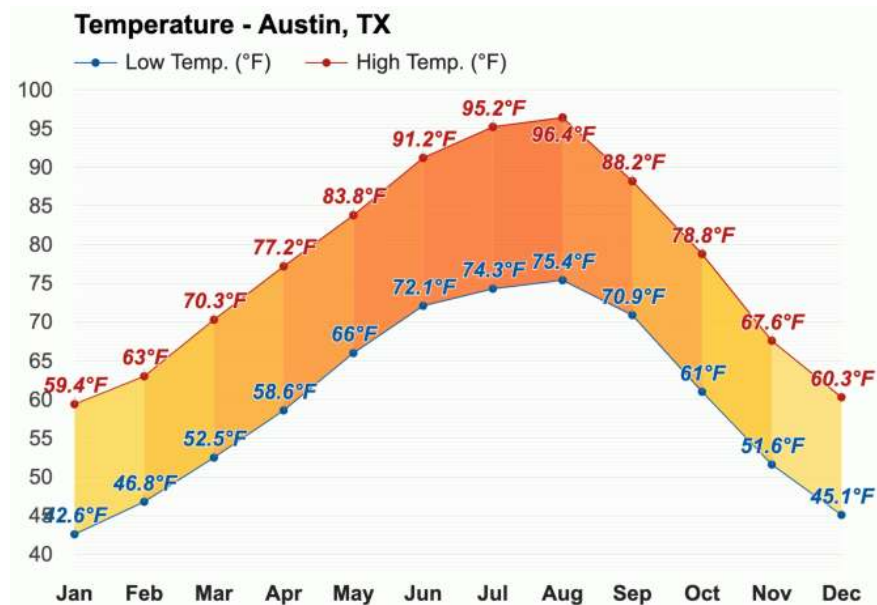
Statistics: An Example



Models

- Input: $x \in \mathbb{R}^n$
- Output: $y \in \mathbb{R}^m$
- Parameters: θ

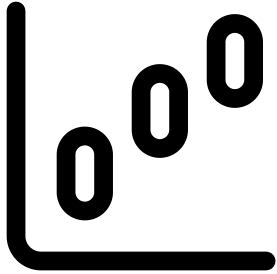
$$f_{\theta} : x \rightarrow y$$



How Are Models Used?

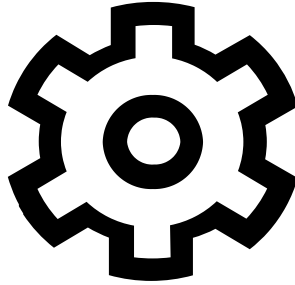
Statistics

- Data analysis
- Explanation



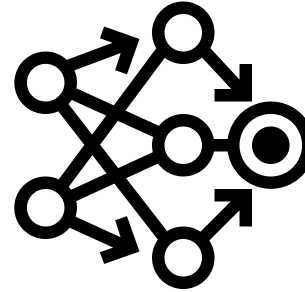
Machine Learning

- Prediction

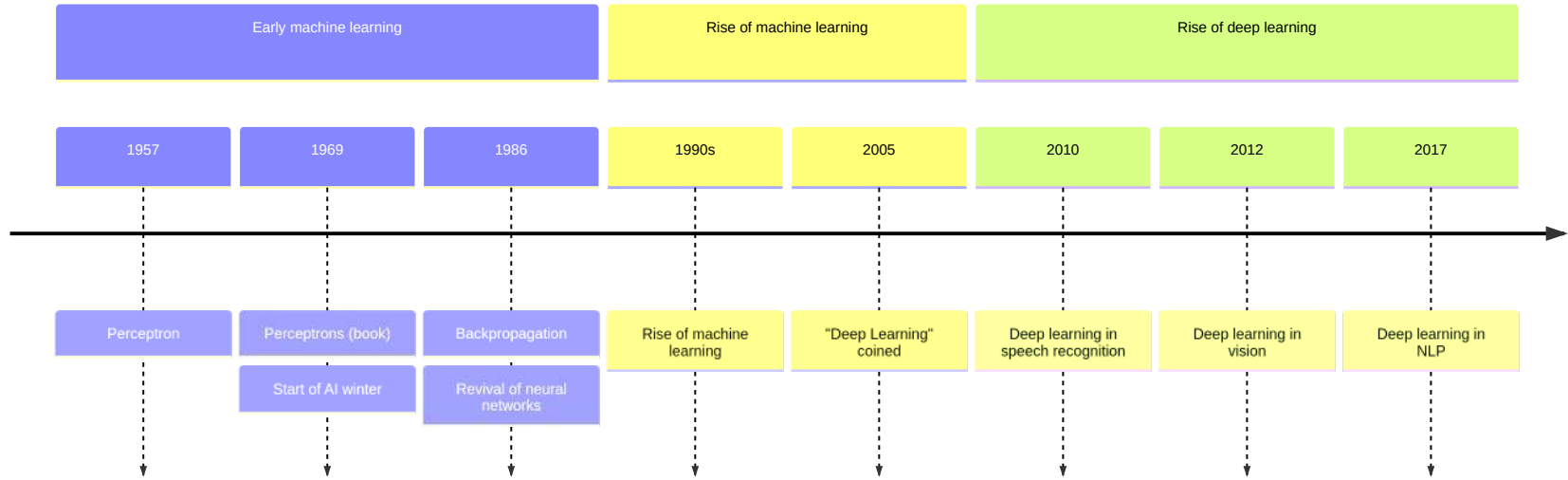


Deep Learning

- Utilizes *deep networks*
- Bigger models!



A Brief History



What Is Deep Learning - TL;DR

Deep learning is a subfield of machine learning.

It studies deep networks, a family of powerful and scalable models.

