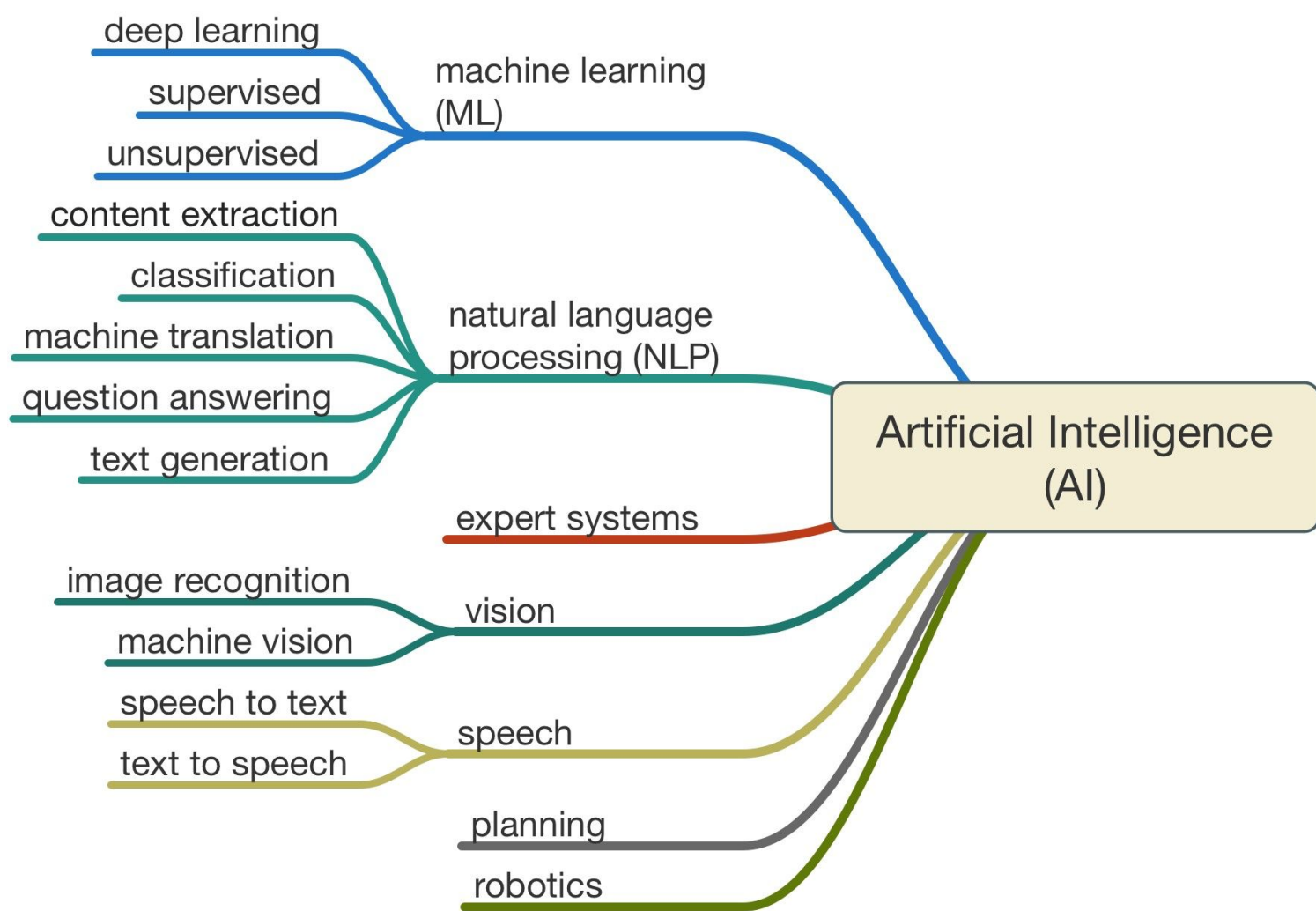


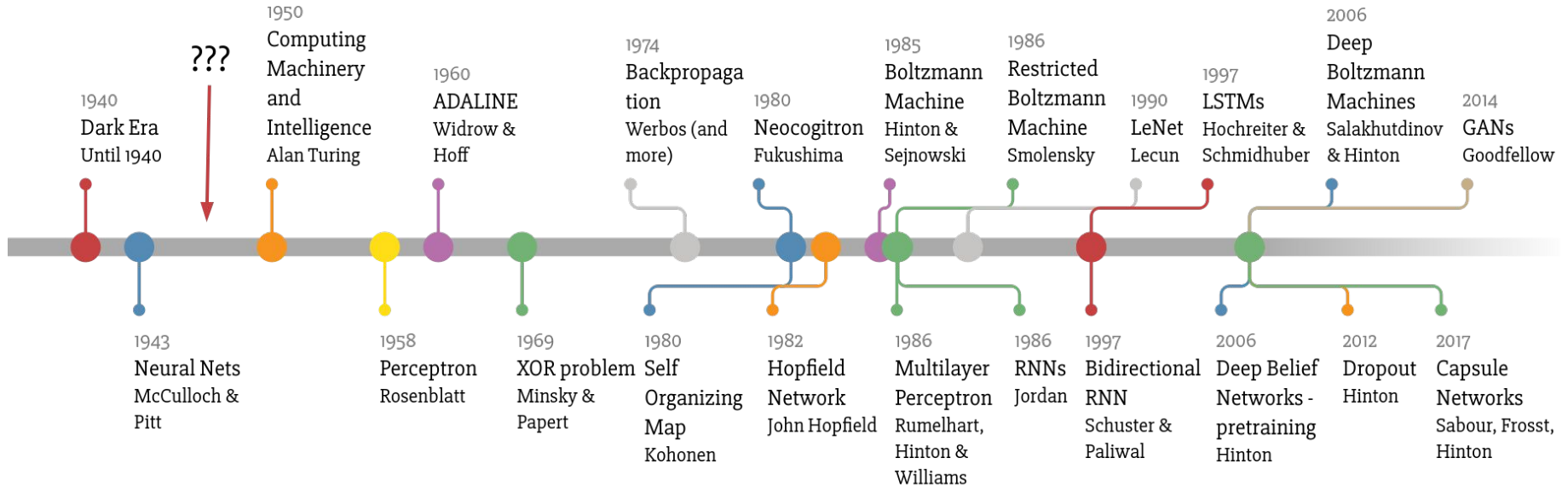
Tema 2 : Historia

Contenido

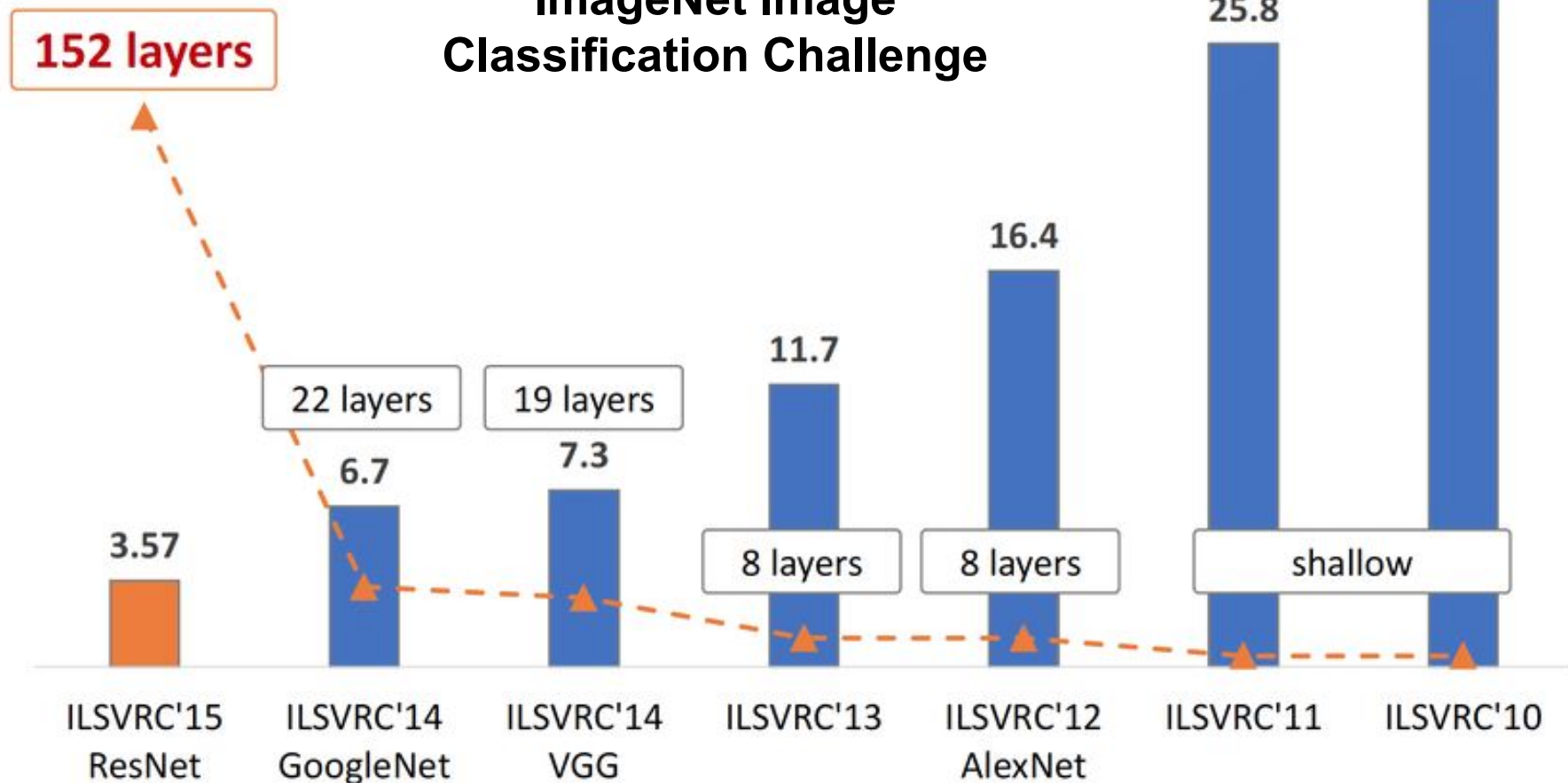
1. Ramas de AI
2. Línea de tiempo de Deep Learning
3. Deep Learning como representación de aprendizaje
4. Por que Deep Learning?
5. Hardware a usar



Deep Learning Timeline

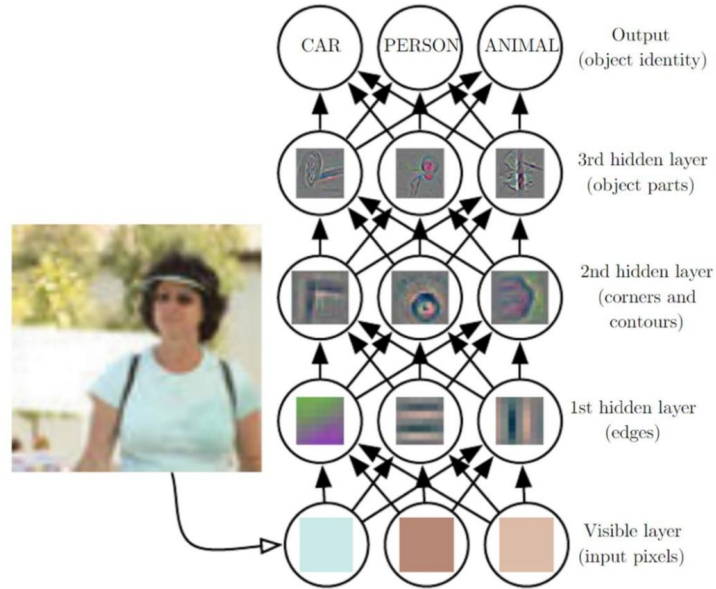
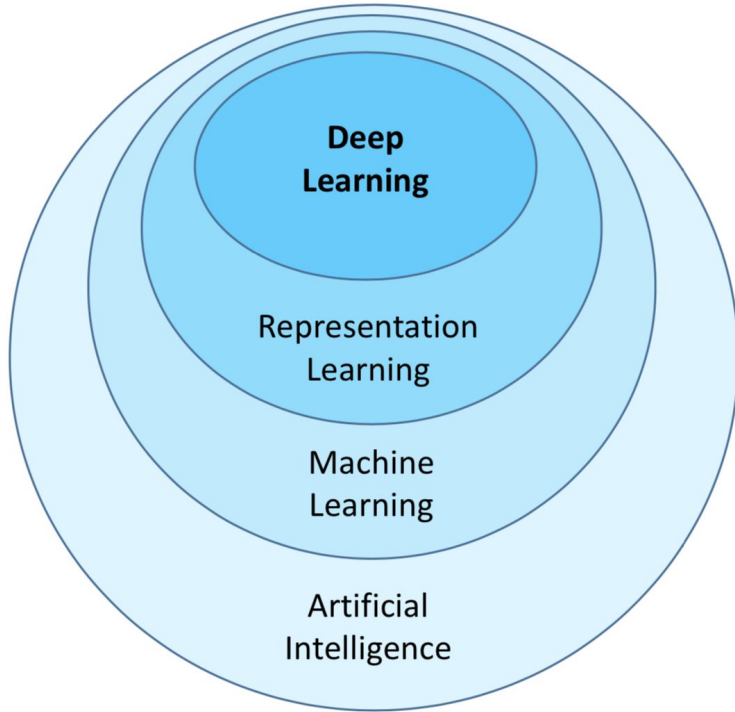


ImageNet Image Classification Challenge



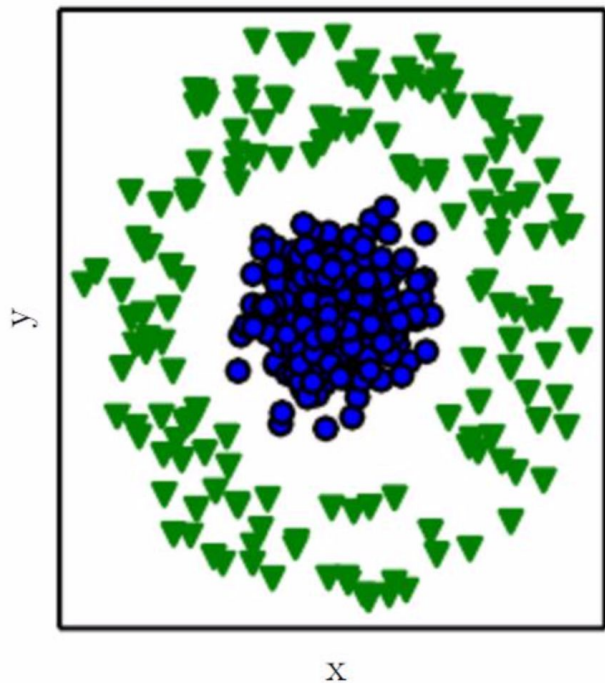
Deep Learning is **Representation Learning**

(aka Feature Learning)

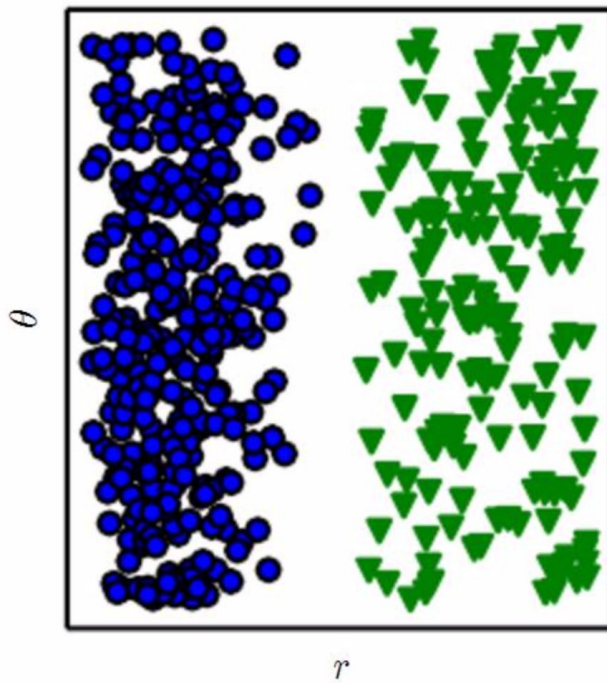


Representation Matters

Cartesian coordinates



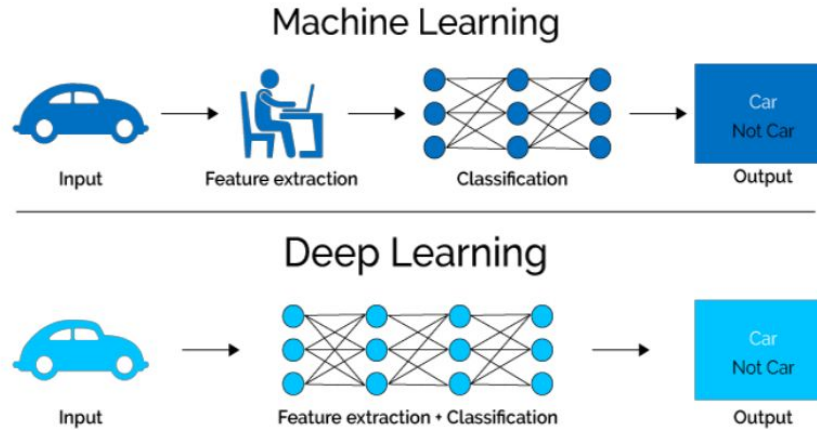
Polar coordinates



Task: Draw a line to separate the **green triangles** and **blue circles**.

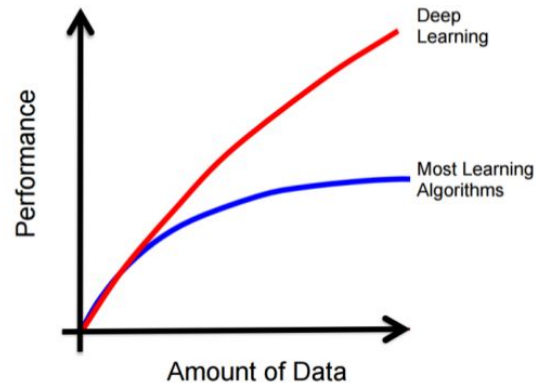
source: MIT Deep Learning

Why Deep Learning? **Scalable** Machine Learning



Interpretability in Machine Learning:

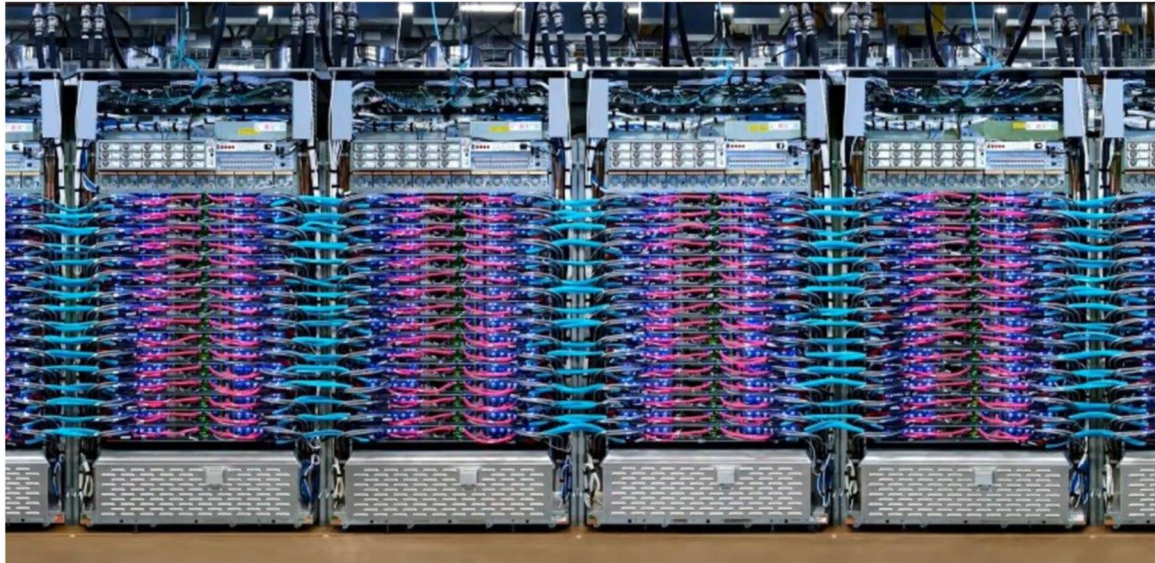
<https://www.youtube.com/watch?v=93Xv8vJ2acl>



source: MIT Deep Learning

Compute Hardware

- **CPU** – serial, general purpose, everyone has one
- **GPU** – parallelizable, still general purpose
- **TPU** – custom ASIC (Application-Specific Integrated Circuit) by Google, specialized for machine learning, low precision



source: MIT Deep Learning