

Supervised Learning Example

Cats vs. Dogs



- **2009 - world's most advanced computer can't tell a cat from a dog**
- **2012 - solved by Google *but* required 16,000 computers!**
- **2015 - Microsoft, Google beat humans at image recognition**
- **2019 - AI beats Stanford radiologists in chest X-ray diagnostics competition**

Unsupervised Learning Example



| | Oppenheimer | Barbie | Dune | Interstellar | Indiana Jones and the Dial of Destiny | Blade Runner |
|--------|-------------|--------|------|--------------|---------------------------------------|--------------|
| User 1 | 4 | | | 5 | 1 | |
| User 2 | 5 | 5 | 4 | | | |
| User 3 | | | | 2 | 4 | 5 |
| User 4 | | 1 | 2 | | | |
| User 5 | | 3 | | | | 3 |