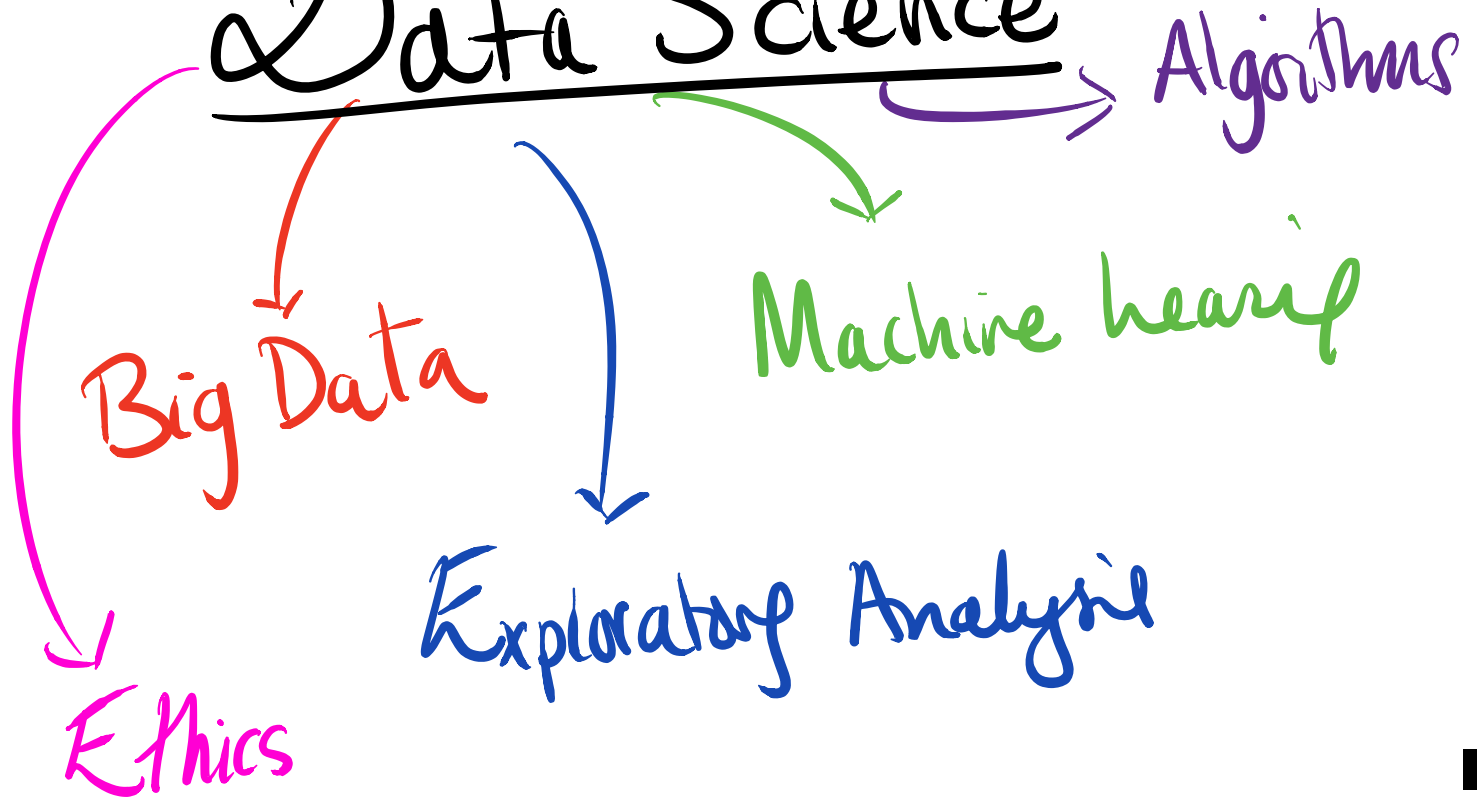


# Introduction to

## Data Science



# Data Science

(vs. Art,  
vs. Politics)

## Scientific Method

↳ Objectivity  
Repeatability  
Experimentation  
Testing  
Peer Review  
Theory / "Models"

Non-Mental eg. Pain  
Factual. → TRUE / FALSE  
Unbiased? Eg. Cancer  
↳ No stake in outcome?

Q. Does science...  
Study only the  
physical?

Q. only produce facts

Q. only Research  
topics w/o "Stake"?

for "Everything"  
↳ "Hypotheses"

Via "Programming & Modern Data  
Techniques"

# Artificial Intelligence

Machine

Decision Making

Def #1

# AI

"Weak AI" ← This "tool"

Machines acting as-if human  
on closed problems which, in human  
Require Intelligence

'Strong AI' ← Doesn't Exist

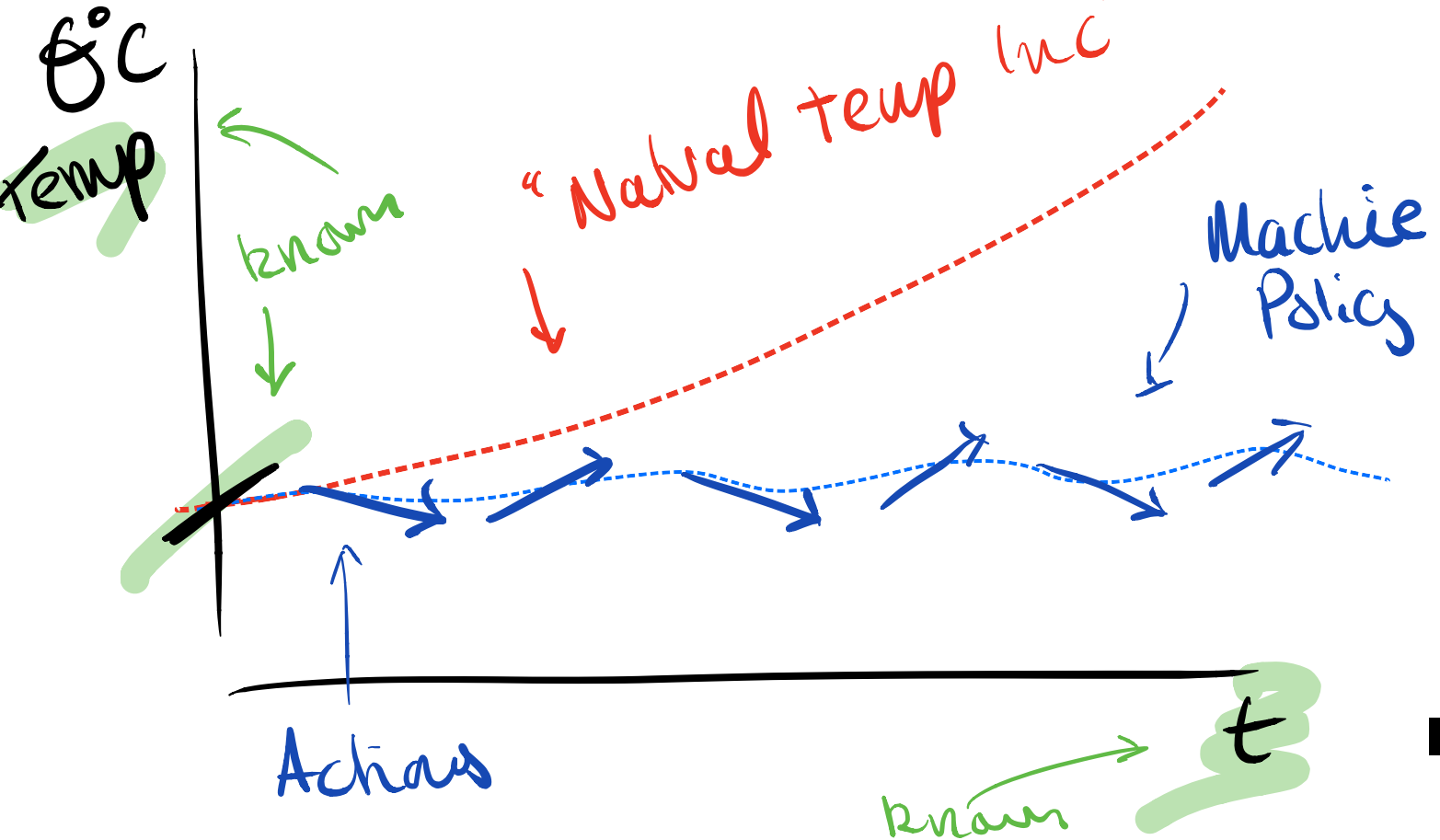
Machines acting as-if human  
on **OPEN** problems which, in human,  
Require Intelligence

# Closed Problem

⇒ "Achäul" are defined  
in terms of KNOWN  
Relevant Quantities

ie. Problem is "Solved"

# Eg. Keep Fridge Cool



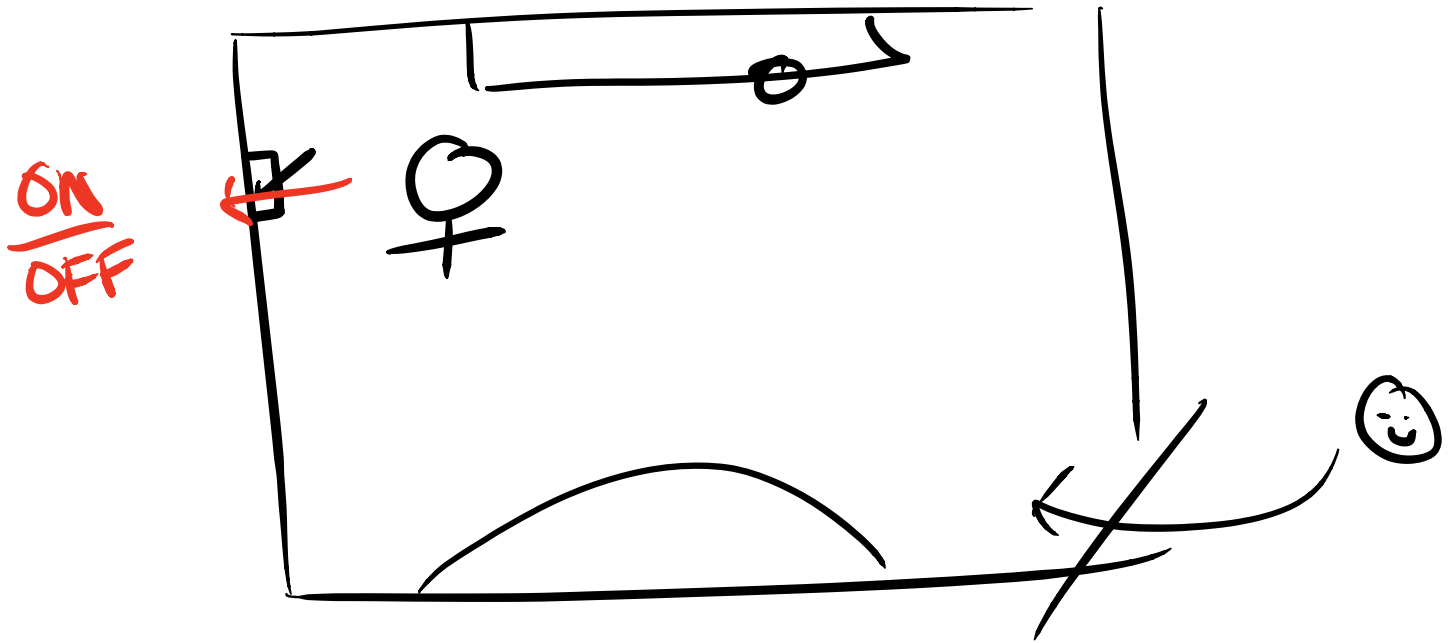
# Open Problem

Relevance Not Est.

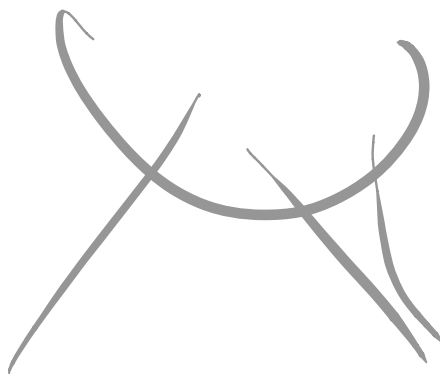
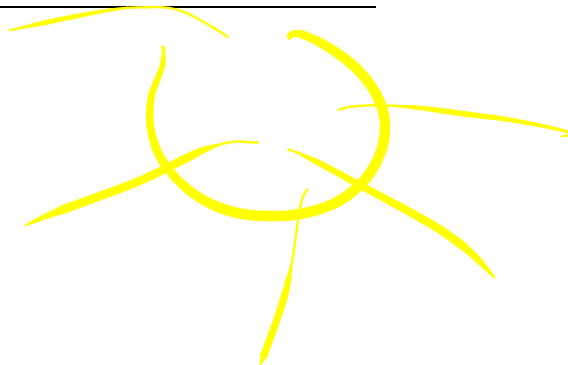
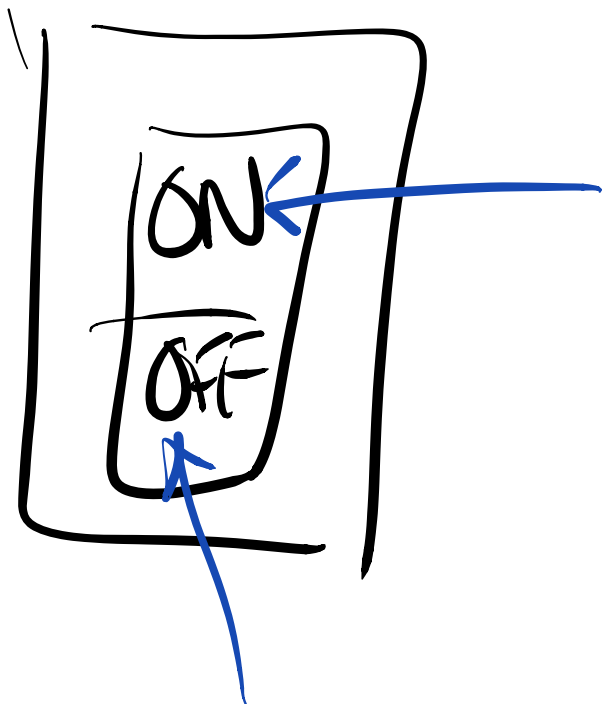
→ Why?

Quantities Unknown

Fig. 3yo wandering around Room.  
"What can I do in this Room?"







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Button → light

Button → Temp & Over.

# Open Problems

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→ Curiosity

Environmental

Adaptation &  
Change.

Exploration

2 → Practice of "AI"

2 → Machine hearing































