SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
COIMBATORE-35
Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

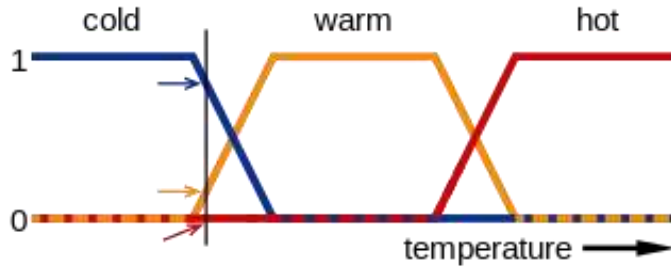# ARTIFICIAL INTELLIGENCE FOR ELECTRICAL ENGINEERING

UNIT III: **FUZZY LOGIC**

TOPIC: **FUZZY INFERENCE - PROPERTIES OF FUZZY SETS**

TOPIC OUTLINE

What is fuzzy Inference system in AI ?
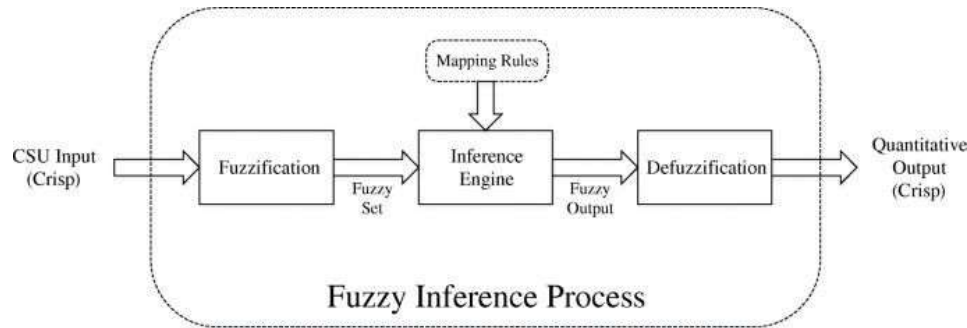
Architecture of fuzzy Inference

What is fuzzy inference properties
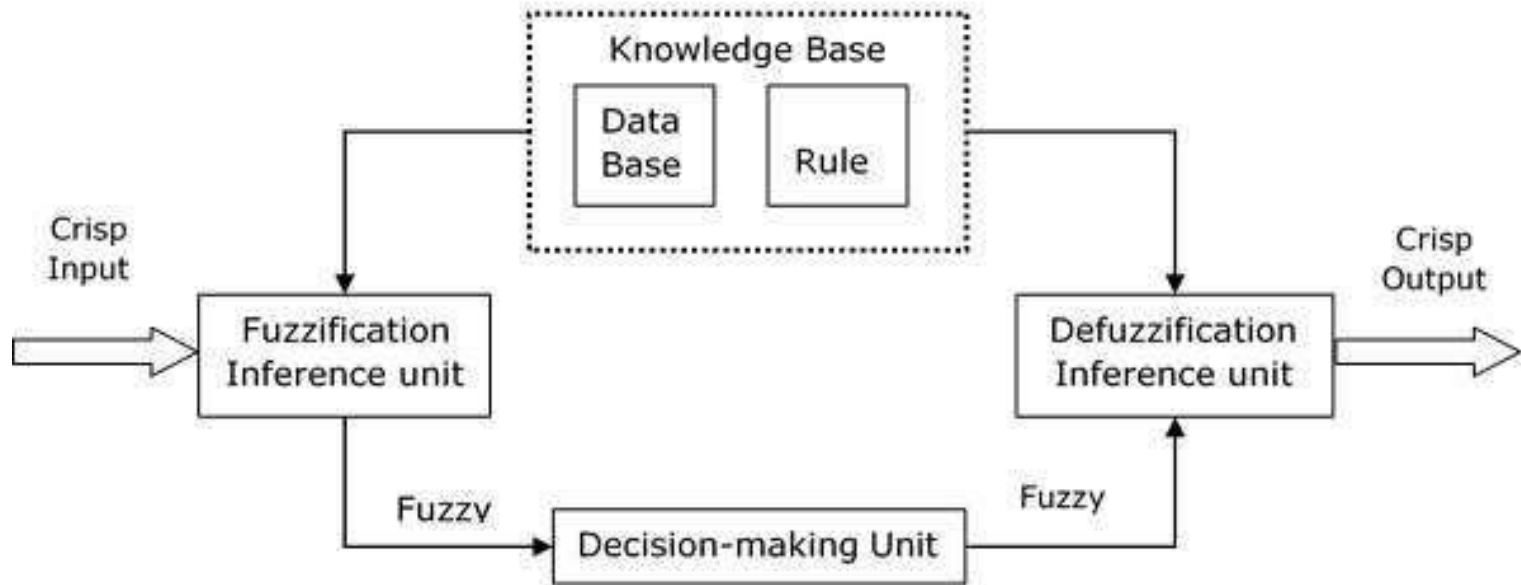
Advantage of
fuzzy Inference in AI?

What is Fuzzy Inference

Fuzzy Inference Process

Fuzzy inference is **the process of formulating the mapping from a given input to an output using fuzzy logic**. The mapping then provides a basis from which decisions can be made, or patterns discerned.
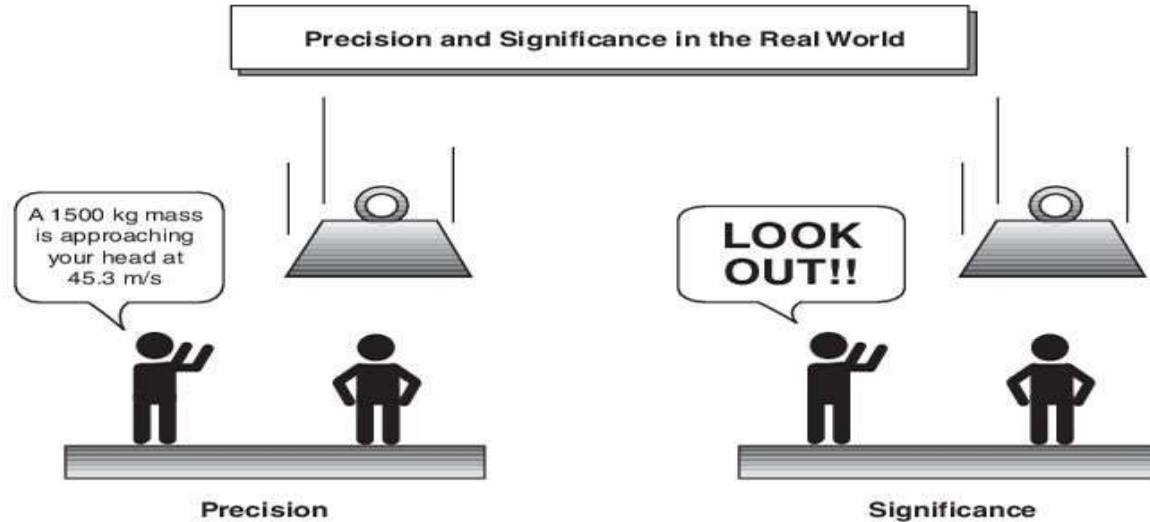
Architecture Of Fuzzy Inference

Fuzzy Inference Properties

- The yield from FIS is consistently a fuzzy set irrespective of its input which can be fuzzy or crisp.
- It is necessary to have a fuzzy output when it is used as a controller.
- A defuzzification unit would accompany the FIS to convert the fuzzy variable into a crisp variable.
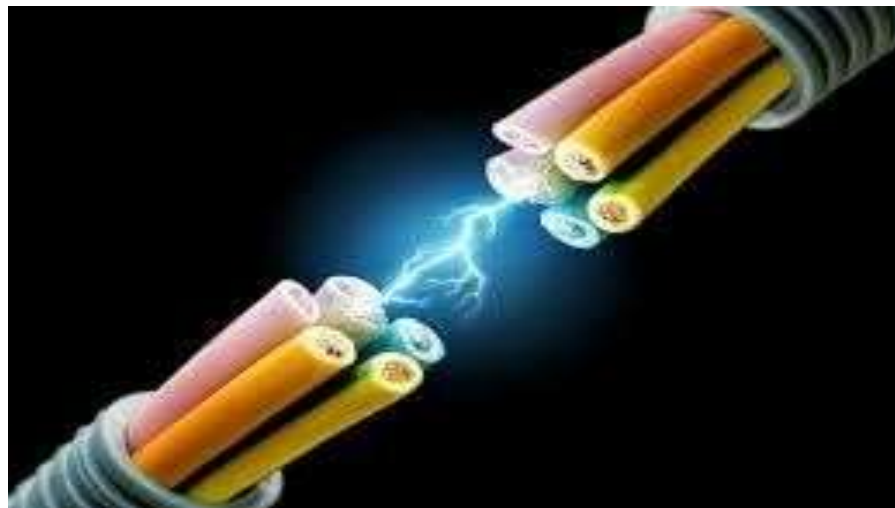
Fuzzy Inference in Real world

Precision and Significance in the Real World

Advantages of Fuzzy Inference System

- Well-suited to human inputs

- More interpretable and rule-based

- Has widespread acceptance

- Functions well with linear techniques, like PID control

- Functions with optimization and adaptive techniques

- Guarantees output surface continuity

- Well-suited to mathematical analysis.

RECAP….

…THANK YOU