



SNS COLLEGE OF ENGINEERING

Kurumbapalayam(Po), Coimbatore – 641 107

Accredited by NAAC-UGC with 'A' Grade

**Approved by AICTE, Recognized by UGC & Affiliated to Anna
University, Chennai**

**Department of Artificial Intelligence and Data
Science**

Course Name – Introduction to Artificial Intelligence

II Year / III Semester

Unit 5 Expert System and Application



Expert Systems

- **Expert Systems** solves problems that are normally solved by human experts
- An **expert system** is a **computer program** that represents and reasons with **knowledge of some specialist subject** with a view to solving problems or giving advice.
- To solve expert-level problems, expert systems will need efficient access to a substantial **domain knowledge base** which must be built as efficiently as possible
- They also need to exploit **one or more reasoning mechanisms** to apply their knowledge to the problems they are given.
- They will also need to be able to **explain**, to the users who rely on them, how they have reached their decisions.



Typical tasks for expert systems

Some typical existing expert system tasks include:

1. The interpretation of data Such as sonar data or geophysical measurements
2. Diagnosis of malfunctions Such as equipment faults or human diseases
3. Structural analysis or configuration of complex objects Such as chemical compounds or computer systems
4. Planning sequences of actions Such as might be performed by robots
5. Predicting the future Such as weather, share prices, exchange rates