

International Conference on **Artificial Intelligence and Cloud Computing (ICAICC-2025)**

Conference Proceedings

May 10, 2025 (Virtual)

Artificial Intelligence for Human Safety

Arulappan SS

Associate Professor, Department of Mechanical Engineering, National Institute of Technology, India

Hazardous and Monotonous Jobs can be handled by Robots. Programming the Robots can be done to handle Hazardous jobs like (a) Welding, (b) Painting, (c) Metal Grinding, (d) Mining and for (e) Under water diving applications. Repetitive work like assembling components in an automobile industry and for other similar cases, Robots of high precision with repeatability can be used. Human Employee's Physical and Mental Fatigue can be avoided by replacing them with Robots in certain Jobs. Vision Robots can be programmed for recognising different objects which are to be handled by them. 'Pattern Recognition' is technical word for identifying different dimension and shape objects by the camera fixed and integrated with the vision robots. Pneumatic or Hydraulic circuits and actuators or stepper' or 'servo' motors are used for arms and limbs movements of the robots. Unlike ordinary Electric motors the Stepper and Servo motors rotation of the output shafts can be can be programmed and controlled by computer. Nuclear Power Plants, Robots are used to feed and remove the nuclear fuel rods.