

# Artificial Intelligence in Manufacturing

**Unnati Sonar, Mannat Chimnani, Kunal Patil**

Guru Gobind Singh Polytechnic, Nashik, India

**Abstract:** *The Artificial Intelligence in Manufacturing leverages machine learning algorithms and advanced data analytics to optimize production processes across the manufacturing lifecycle, including design, production, quality control, and maintenance, by analyzing real-time sensor data, enabling predictive maintenance, improved product quality, increased efficiency, cost reduction, and ultimately driving a more adaptable and data-driven "smart factory" environment.*

**Keywords:** Artificial Intelligence