

# Robotics in Healthcare

**Rachidatou Fofana**

Department of Computer Science and Application

Sharda School of Engineering & Technology, Sharda University, Greater Noida, India

2023844955.rachidatou@ug.sharda.ac.in

**Abstract:** *This review explores the integration of robotics in healthcare, focusing on the current state, advancements, and the future potential of robotic systems. These systems, which include surgical robots, rehabilitation robots, and robotic diagnostic systems, have significantly impacted patient outcomes and healthcare efficiency. The review will discuss various data points, benefits, and challenges, as well as ethical concerns surrounding the adoption of healthcare robotics. Emerging technologies like nanobots and AI-integrated robots are poised to further revolutionize the field. This paper provides a critical analysis of these developments, highlighting both opportunities and limitations. The incorporation of robotics into healthcare has brought about a revolutionary change in the way medical services are delivered, significantly improving accuracy, operational efficiency, and patient care outcomes. This paper delves into the advancements, practical applications, obstacles, and prospective developments in the field of healthcare robotics. A structured approach was employed, encompassing a thorough review of recent literature, detailed case study analyses, and assessments of innovative technologies. The study reveals substantial advancements in areas like surgical robotics, rehabilitation devices, and patient support systems, while also identifying persistent challenges such as high costs, ethical issues, and technical constraints. This review highlights the transformative potential of robotics in reshaping modern healthcare and explores strategies to overcome the barriers to its widespread implementation.*

**Keywords:** robotics