

Operations Research in Healthcare Simulation Modeling of Emergency Department Patient Flow

Raghad Nazal Alruwaili

Industrial Engineering Department

College of Engineering

Northern Border University, Saudi Arabia

rodah3_03@icloud.com

Abstract

This project enhances this research investigates the enhancement of emergency department services by integrating an AI-based Smart Triage Device that optimizes patient flow, reduces waiting times, and improves operational efficiency. Through simulation and virtual testing, potential challenges are identified and resolved before real-life implementation, ensuring a safer and more effective deployment.

Keywords

Operations Research, Healthcare Simulation, Modeling, Emergency Department Patient