The Emergency Department (ED) of a hospital serves as the primary point of access for patients requiring immediate medical attention. From trauma cases to minor injuries, heart attacks to respiratory distress, the ED is prepared to handle a multitude of medical crises with efficiency and expertise. Within this fast-paced and critical environment, healthcare professionals work tirelessly to assess, stabilize, and treat individuals facing a diverse range of medical emergencies. Staffed by skilled physicians, nurses, technicians, and support personnel, the department is equipped with advanced medical technology and resources essential for delivering timely and effective care. 1.1 At its core, the ED embodies the essence of emergency medicine, characterized by its responsiveness to acute medical needs. The ED operates around the clock, providing care for patients of all ages and backgrounds, regardless of their ability to pay. As shown in Fig.