Rajeev Gandhi Memorial College of Engineering & Technology
(Autonomous)
Nandyal-518501, Andhra Pradesh. India
Department of Computer Science & Engineering (DATA SCIENCE)

ABSTRACT

Title of the Project: Fog Based AI Framework for Accurate and Early Detection Of Chronic Kidney Disease

Domain: Machine Learning

Abstract:

Chronic Kidney Disease (CKD) is a critical global health challenge, requiring early detection to prevent progression and improve patient outcomes. This study presents a **Fog-Based AI Framework** for the accurate and early diagnosis of CKD using machine learning algorithms. The proposed framework leverages the decentralized and low-latency nature of fog computing to enable real-time processing and analysis of patient data closer to its source. By integrating advanced machine learning techniques, including classification and predictive models, the framework ensures high diagnostic accuracy while addressing the challenges of network congestion and latency inherent in cloud-centric systems.

The system's explainable AI capabilities enhance transparency, aiding healthcare professionals in decision-making. Performance evaluation demonstrates the framework's scalability, robustness, and potential for seamless deployment in resource constrained environments. This work underscores the transformative role of fog computing and machine learning in building intelligent, distributed systems for efficient CKD diagnosis, paving the way for improved healthcare delivery.

Supervisor:

Dr. M.SriRaghavendra M. Tech., Ph.D.
Associate Professor
Department of CSE (DS)

Co-Supervisor

Mr.S.Md.Shakeer M.Tech., (Ph. D)
Assistant Professor
Department of CSE (DS)

Project Team:

POLIMENI KAVYA SRI (21091A3217)
SHAIK ATHIKA (21091A3206)
KAMMARI TANUJASREE (21091A3258)

Signature of Co-Supervisor **Signature of Supervisor** **Signature of HOD**