

A MACHINE LEARNING FRAMEWORK FOR DIAGNOSING HEPATOCELLULAR CARCINOMA: VIRAL VS. NON-VIRAL CASES

1Dr. K Narasimhulu, 2Mangali Venkata Siva Vamsi Krishna

1Associate Professor Department of CSE, Rajeev Gandhi Memorial College of Engineering & Technology Nandyal.

2MCA student, Rajeev Gandhi Memorial College of Engineering & Technology Nandyal.

Hepatocellular carcinoma (HCC), both viral and non-viral, is becoming more not unusual in developing nations, with delayed detection considerably contributing to expanded mortality rates. Although traditional diagnostic strategies are seemed because the gold standard, their barriers every so often postpone the verification of cancer advancement. The arrival of artificial intelligence (AI), mainly machine learning and Deep learning, has tested sizable ability in enhancing the early and precise detection of HCC through the evaluation of elaborate biomedical datasets. AI-driven methodologies are presently augmenting traditional strategies in histopathology, radiography, biomarker analysis, and electronic health record (EHR)-based diagnostics, improving both detection speed and precision. This paper examines the benefits and downsides of traditional HCC diagnostic techniques in terms of AI-driven solutions, emphasizing how AI can beautify existing approaches for extra reliable early detection. An outline of cancer-associated databases is presented, highlighting their significance in education AI fashions to decorate diagnostic efficacy. Integrating AI with conventional methods enables healthcare carriers to improve diagnostic efficiency, potentially lowering mortality fees linked to HCC via spark off intervention and tailored treatment regimens.