**HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT**

**Computer Science and Engineering with Data Science(CSD)**

**COURSE PROJECTS (2023-24)**

**III B.Tech II Semester**

**Predictive Maintenance for Industrial IoT**

**ABSTRACT**

Industry 4.0 enables technological trends like Big Data Analytics and Machine Learning techniques to converge into and merge with traditional manufacturing processes, resulting in smart manufacturing. Smart manufacturing techniques leverage the use of Industrial Internet of things (IIoT) technology using IoT sensors that are fitted on physical assets to enhance manufacturing processes. IoT Sensors enable smart manufacturing facilities capable of autonomously exchanging information, which can be used to drive business decisions more accurately. Businesses that adopt Smart manufacturing techniques lead to a competitive advantage for these firms as they can bring in higher profit margins, reduced maintenance costs, energy savings, and better-quality products. This Project proposes an architecture for IIoT based predictive maintenance. This project focuses on creating a predictive maintenance model for industrial machines in the automobile industry. By leveraging IoT technology, the model aims to anticipate sudden breakdowns, making production and maintenance processes smarter. The study showcases how implementing such a model can lead to improved efficiency and cost savings in manufacturing operations.

**TEAM MEMBERS:**

Arigala Likhith Kumar 21E51A6703

Raolapalli Pushkara Kaushik Naidu 21E51A6744

Thatipampula Naveen 21E51A6761

V Ramesh 21E51A6762

**Under the Guidance of**

Ms. Richa Tiwari

Assistant Professor

Department of ET(DS/CS)