MOHAMED IRFANUDEEN R.S

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Profile

Biomedical and Asset Management Engineer with hands-on experience in laboratory Equipment maintenance, preventive maintenance planning, and equipment lifecycle management across hospital and institutional environments. Skilled in fault diagnosis, calibration, and regulatory compliance (ISO 13485, IEC 60601). Adept at RFID-based asset tracking, equipment–IT integration, and data-driven maintenance planning to enhance laboratory uptime, patient safety, and operational efficiency. Demonstrates strong collaboration, analytical thinking, and documentation accuracy in multi-disciplinary healthcare and technical settings.

Experience

April 2025 – Oct 2025 Hospital.,)Bijapur

🔖 **Assistant Asset Manager – Proteger AI Pvt. Ltd.,(BLDE Medical College and**

- Conducted preventive and corrective maintenance planning, asset inventory audits, and reconciliation across equipment in hospitals and medical college. Supported equipment lifecycle management, ensuring compliance with hospital and industry standards.

- Collaborated with hospital teams and vendors to improve asset management workflows, documentation, and regulatory reporting.

Jan 2025 –April 2025

🔖 **Junior Biomedical Engineer – Proteger AI Pvt. Ltd., Bangalore**

- Researched and documented RFID-based asset tracking systems for integration into Vajra hospital asset management software.

- Contributed to equipment performance analytics and preventive maintenance scheduling to improve uptime and operational safety. Performed module validation, API testing (Postman), and user manual verification, ensuring system reliability and usability.

May 2024 – June 2024

🔖 **Biomedical Engineer Intern - Prashan Medical Technologies., Coimbatore**

- Assisted in the installation, calibration, and performance verification of medical analysers, ventilators, infusion pumps, and patient monitors. Supported the creation of maintenance logs, quality control records, and preventive maintenance schedules for critical care equipment.

- Participated in equipment troubleshooting and root cause analysis (RCA) under senior engineers' supervision.

May 2023 – June 2023

🔖 **Biomedical Intern - Thiruvarur Medical Centre., Tiruvarur.**

- Assisted in documenting device performance, fault reports, and maintenance records to enhance reliability and compliance.

Education

2021 – 2025 **B.Tech, Karunya Institute Of Technology And Sciences** *Biomedical Engineering with specialization in AI and ML CGPA:*8.47.

2021 **Class 12,O.M.D Matriculation Higher Secondary School** .
*State Board of Tamilnadu.:*88.1%

2019 **Class 10,O.M.D Matriculation Higher Secondary School**
*State Board of Tamilnadu.:*86.4%

Projects and Patents

Projects

1. **Endoscopic images based classification on gastrointestinal disease detection**, Developed and evaluated a machine learning model, likely leveraging Random Forest Classifier, for the automated classification of gastrointestinal diseases from endoscopic imagery. This project involved dataset acquisition and preprocessing, model architecture design, training, and rigorous performance validation, with the goal of providing a decision support tool to assist medical professionals in achieving faster and more accurate diagnoses from endoscopic examinations., **2025**.

2. **Blood group detection using convolutional neural network (cnn),** Proposed a method that involves preprocessing blood sample images and training a convolutional neural network (CNN) model on a labeled dataset of blood samples. This trained model achieves high accuracy in classifying samples into their respective blood groups, addressing critical needs in healthcare diagnostics and advancing the application of artificial intelligence in medical technology., **2024**.

3. **Design, fabrication and testing of eyelid antenna sensor**, Designed an Eyelid Antenna Sensor (EAS) by using Altair Feko software to improve safety within automotive settings. This compact, nonintrusive sensor integrates into the vehicle's interior, leveraging natural eyelid movement to detect drowsiness and reduce the risk of accidents, addressing vital safety challenges in advanced mobility., **2024**.

4. **Drowsiness detection system for drivers**, Developed a working prototype of a driver monitoring system by using Arduino and motor circuits that detects drowsiness and fatigue to enhance road safety. This innovative solution aims to reduce traffic accidents by providing real-time alerts, addressing critical safety concerns within the realm of advanced healthcare technologies and mobility solutions., **2023**.

5. **Obstacle recognition system**, Built a prototype system by using Arduino and ultrasonic sensor that aids individuals with visual impairments in obstacle detection through vibrational feedback. This innovative solution enhances mobility and daily activities, promoting safety and independence by employing advanced sensing technology to identify barriers, thereby addressing critical needs in healthcare and assistive technology., **2022**.

Patents

Patents

1. G Samuelraj Chrysolite, Mohamed Irfanudeen, Antojose "**A wearable eyelid antenna sensor for real-time driver drowsiness monitoring**," **Patent published**., **2025,** Application No: **202541031148**

Others

Languages 🔖 Strong reading, writing and speaking competencies for English, Tamil, Arabic.

Coding 🔖 C, C++, MATLAB, Embedded C, Python

Software 🔖 Altair Feko, Math Works, MS Office, MATLAB, Lab VIEW, CANVA, Auto desk Eagle, Tinker CAD, Atmel studio, Arduino IDE, Auto CAD, Spyder, PyCharm.

Area Of Interest 🔖 Medical Device Design and Development, Antenna Design and Development, Elec- tromagnetic Simulation and Analysis, Medical Imaging and Image Processing, Signal processing, Artificial Intelligence in Healthcare, Regulatory Affairs and Embedded System.

Skills 🔖 Asset Management, Biomedical Equipment Servicing, Laboratory Automation Systems, Preventive & Corrective Maintenance, Calibration & Validation, Fault Diagnosis & Root Cause Analysis, Laboratory Information Systems (LIS), RFID & IoT Integration, API Testing (Postman), Data Logging & Documentation, Quality Control & Compliance (ISO 13485, IEC 60601)

Miscellaneous Experience

Awards and Achievements

2024 🔖 **1st prize in quiz, hackathon and circuit debugging**, Karunya Institute Of Technology And Sciences.

🔖 **Second Rank Holder Award**, Karunya Institute Of Technology And Sciences.

Certification

CISCO 🔖 **Cybersecurity Essentials**

🔖 **Programming Essentials in Python**

🔖 **Programming Essentials in C**

NPTEL 🔖 **Technical English for Engineers**

🔖 **Introduction to Biostatistics**

🔖 **Introduction to Biomechanics**

🔖 **Introduction to Internet of Things**

🔖 **Cloud Computing**

Coursera 🔖 **Crash Course On Python**

🔖 **Medical Device and Regulatory Affairs**

Extra-Curricular Achievements

🔖 **IITM Build Club Member,Karunya University**

🔖 **Rotaract Club Member,Karunya University**

🔖 **Department Association Member,Karunya University**

Declaration

I hereby declare that the information provided in this CV is true and accurate to the best of my knowledge. I understand that TDL/HSL may contact the awarding bodies to verify my academic and professional qualifications, and I will provide copies of my certificates if requested.

23.11.2025   Mohamed Irfanudeen R.S