DEPARTMENT OF APEX INSTITUTE OF TECHNOLOGY

PROJECT PROPOSAL

1. Project Title: - **Predictive Modeling for Disease Diagnosis: Integrating Medical Data Analysis**

2. Project Scope: -

Introduction: Malaria remains a significant global health challenge, particularly in regions with limited access to healthcare resources. The accurate and timely diagnosis of malaria is crucial for effective treatment and control of the disease. Predictive modeling offers a promising approach to enhance malaria diagnosis by leveraging medical data analysis techniques to develop robust predictive models.
Objective: The primary objective of this project is to develop a predictive modeling system for malaria diagnosis by integrating various medical data analysis techniques. This system aims to improve the accuracy and efficiency of malaria diagnosis, particularly in resource-constrained settings.

Scope of Work:

1. **Data Collection and Preprocessing:**
   - Gather diverse datasets containing clinical, demographic, and laboratory data related to malaria cases.
   - Preprocess the collected data to handle missing values, outliers, and ensure data quality and consistency.
   - Explore various data preprocessing techniques such as normalization, feature scaling, and dimensionality reduction.
2. **Feature Selection and Engineering:**
   - Conduct feature selection to identify the most relevant features for malaria diagnosis.
   - Explore domain knowledge and medical expertise to engineer new features that may enhance the predictive power of the model.
   - Utilize techniques such as principal component analysis (PCA) and feature importance analysis to guide feature selection.
3. **Model Development:**

- Frontend development tools like HTML, CSS, and JavaScript may also be required for designing user interfaces.

7. **Documentation and Collaboration Tools:**
   - Version control system (e.g., Git) for managing codebase and collaboration among team members.
   - Project management tools (e.g., Jira, Trello) for tracking tasks, milestones, and deadlines.
   - Documentation tools (e.g., Markdown, LaTeX) for writing project reports, documentation, and research papers.

STUDENTS DETAILS

Name	UID	Signature
Shreshth Sahay	21BCS5409	
B. Venu Gopal Reddy	21BCS5361	

APPROVAL AND AUTHORITY TO PROCEED

We approve the project as described above, and authorize the team to proceed.

Name	Title	Signature (With Date)
Prabjot Singh Bali	Assistant Professor	