PROJECT PLAN DOCUMENT

(Due: 31st January, 2024)

Project number	***Team 9***
Project Title	***Software Part for Clinical Biosensor***
Document	**Project Plan**
Creation date	***31/01/24***
Created By	***Mayaank Ashok(2022111022), Nitin Avuthu(2022115002), Maitreya Chitale(2022114011), Ketaki Shetye(2022114013)***
Client	***Saaraj Gupta – Bionovus Technology Pvt. Ltd.***

Brief problem statement

The problem at hand involves the development of an algorithm for quantifying color intensity in a clinical biosensor product designed to test blood samples. To address this, we need to create an algorithm capable of accurately assessing the color intensity from provided sample color gradient spots. Additionally, a Human-Machine Interface (HMI) design is required, incorporating various screens and tabs as outlined in the provided scheme, ensuring a user-friendly experience for effective interaction with the biosensor system.

Team Members

Mayaank Ashok: Algorithm Designer, Tester

Nitin Avuthu: Code Implementation, Coordination with Client

Ketaki Shetye: Code Implementation, Team Manager

Maitreya Chitale: Code Implementation, Tester

Team Communication

Weekly the team (students) meet once, to discuss the project plan and to share individual progress.

Weekly we meet with the client once, to share team progress and get updates and suggestions and refine the project requirements.

Development Environment

Collaboration Tools: Git, GitHub, Google Meet.

Programming Language: Python, Javascript, MongoDB

Development Environment: Jupyter Notebook, VS Code

Libraries Used: OpenCV, NumPy, ReactJS, Flask

Milestone Schedule

Milestone	Due Date	Release	Deliverable?
Setup git repo	10/01/24	R1	No
Create draft requirements	12/01/24	R1	No
Finalize requirements	20/01/24	R1	Yes
Learn libraries for the image detection algorithm (OpenCV, NumPy)	*24/01/24*	R1	No
Implement the image detection algorithm.	*3/02/24*	R1	Yes
Learn MongoDB, Flask	*10/02/24*	R1	No
Create the database with terminal UI	*21/02/24*	R1	Yes
Expose database via Flask	*1/03/24*	R1	Yes
Learn React.js	*12/02/24*	R1	No
Implement the Web UI	*1/03/24*	R1	Yes
Integrate the UI with Database and get it running on Raspberry Pi	*17/3/24*	R1	Yes
Integration of image detection algorithm with the current system	*25/3/24*	R2	Yes
Transfer data to centralized server	*28/03/24*	R2	Yes
Convert sample data to report and print.	*31/03/24*	R2	Yes
Store data from temperature sensor and create graphs	*4/04/24*	R2	Yes
Integrate the above-mentioned modules and run end to end tests.	*15/04/24*	R2	Yes