Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	17 NOVEMBER 2023
Team ID	PNT2022TMIDxxxxxx
Project Name	Project - xxx
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

Guidelines:

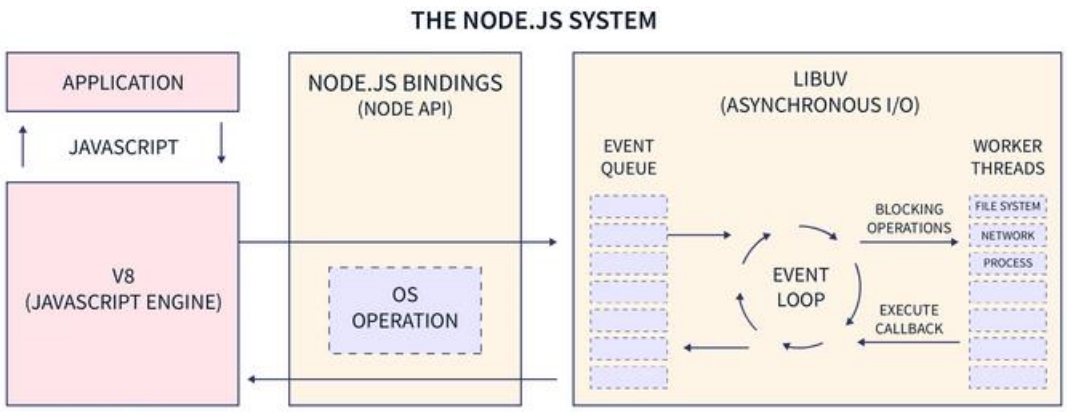

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User can access our frontend and upload an image of the scan and get the results	HTML(EJS), Bootstrap, JavaScript, ChartJS
2.	NodeJS	User's webpages (i.e., templates) are handled and routed by using expressJS and nodeJS	JavaScript, expressJS, nodeJS
3.	Flask	Model predictions are done on flaskJS server	Flask, TensorflowJS
4.	chartJS API	Charts to render the results	chartJS
5.	CNN	Image pattern detection among trained scans using keras layers and SMOTE principle to increase efficiency	Pattern Recognition model

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Bootstrap	Bootstrap is a frontend styling library which maximises the efficiency and minimises the CSS coding	Bootstrap v5.0
2.	Security Implementations	Uses https protocol for more secure information transfer	https
3.	Scalable Architecture	This can be scaled as an external independent API as it does not depend on Database which makes it easily acessible	Flask and nodeJS server

S.No	Characteristics	Description	Technology
4.	EJS	EJS is a html templating engine which increases the efficiency and reduces the cluster and repetition of html blocks and uses Javascript logic to template the HTML	EJS

References:

https://getbootstrap.com/docs/5.1/getting-started/introduction/

https://ejs.co/#docs

https://expressjs.com/en/5x/api.html

https://flask.palletsprojects.com/en/3.0.x/

https://www.tensorflow.org/api_docs