

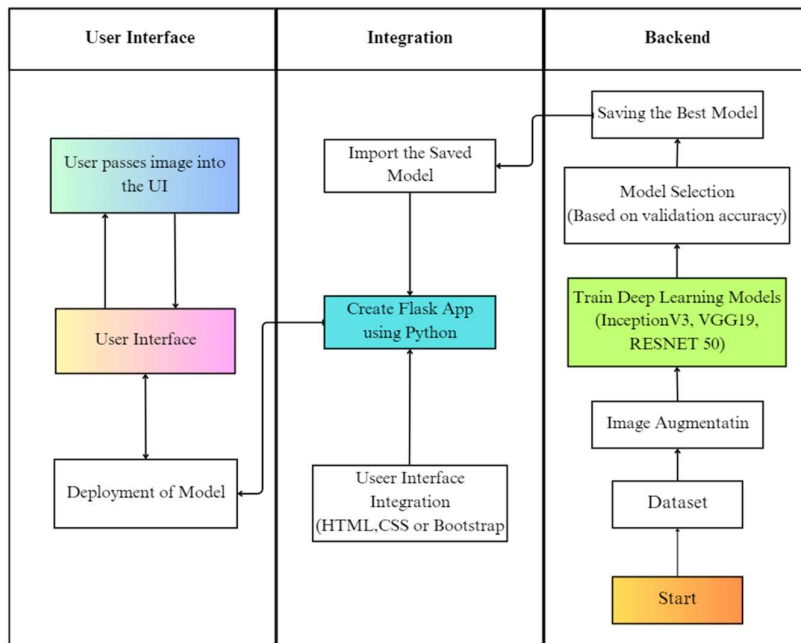
Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	27 October 2023
Team ID	Team-592792
Project Name	Deep Learning Model for Eye Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:

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



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI	HTML, CSS, JavaScript etc.
2.	Data Preprocessing	Resize, Normalize and Augment images	Python, keras
3.	Database	Collect the Dataset Based on the Problem Statement	File Manager, kyagle
4.	File Storage	File storage requirements	Local Filesystem, Google drive
5.	Web Application	Used to Create a web Application, Integrating Frontend and Back End	Python Flask, Django etc.
6.	Deep Learning Model	Building and training model to predict Eye diseases	CNN, Transfer Learning-InceptionV3, VGG19, RESNET 50
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration:	Local, Cloud Foundry etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python's Flask, Bootstrap
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Encryptions, Data Backup, Authentication
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	No Technology used
4.	Availability	Justify the availability of application (e.g., use of load balancers, distributed servers etc.)	No Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	No Technology used

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>