**INPUT DESIGN AND OUTPUT DESIGN**

**INPUT DESIGN**

The input design is the link between the information system and the user. It comprises the developing specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. Input Design considered the following things:

* What data should be given as input?
* How the data should be arranged or coded?
* The dialog to guide the operating personnel in providing input.
* Methods for preparing input validations and steps to follow when error occur.

**OBJECTIVES**

1. Input Design is the process of converting a user-oriented description of the input into a computer-based system. This design is important to avoid errors in the data input process and show the correct direction to the management for getting correct information from the computerized system.

2. It is achieved by creating user-friendly screens for the data entry to handle large volume of data. The goal of designing input is to make data entry easier and to be free from errors. The data entry screen is designed in such a way that all the data manipulates can be performed. It also provides record viewing facilities.

3. When the data is entered it will check for its validity. Data can be entered with the help of screens. Appropriate messages are provided as when needed so that the user will not be in maize of instant. Thus the objective of input design is to create an input layout that is easy to follow.

**1. Introduction**

The Input Design Document outlines the input requirements and specifications for the Deep Learning-Based Blood Group Detection project. It details the types of input data the system will accept, the formats, validation rules, and the user interface design for data entry. This document serves as a guide for developers and designers to ensure that the system captures and processes input data accurately and efficiently.

**2. Input Requirements**

**2.1 Input Types**

The system will accept two main types of input:

* Blood Images: Images of blood samples used for detecting blood groups.
* Fingerprint Images: Images of fingerprints utilized for non-invasive blood group detection.

**2.2 Input Formats**

**Image Format:** The system will accept images in the following formats:

* JPEG (.jpg, .jpeg)

**2.3 Image Size**

**Resolution:** The images should ideally be captured at a resolution of at least 1280x720 pixels for optimal analysis.

**File Size:** The maximum file size for each image should not exceed 1 MB to ensure efficient processing and storage.

**3. User Interface Design**

**3.1 Upload Interface**

The user interface will provide a simple and intuitive design for uploading blood and fingerprint images. The interface will include the following elements:

**File Upload Button:**

* Label: “Upload Blood Image” / “Upload Fingerprint Image”
* Type: Button to trigger the file selection dialog.

**File Input Field:**

* Type: File
* Acceptable formats: JPEG

**Image Preview Section:**

Displays a thumbnail of the uploaded image for user confirmation.

**Submit Button:**

* Label: “Submit for Detection”
* Type: Button to initiate the detection process after image upload.

**3.2 Example Layout**

plaintext

Copy code

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| Blood Group Detection |

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| Upload Blood Image: [Choose File] [Preview] |

| Upload Fingerprint Image: [Choose File] [Preview] |

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| [Submit for Detection] |

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| Detection Result: |

| [Display Result Here] |

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**Input Data Flow**

**Workflow for Blood Image Detection**

* The user clicks the “Upload Blood Image” button.
* The file selection dialog opens, allowing the user to choose an image.
* Once an image is selected, it is displayed in the image preview section.
* The user clicks “Submit for Detection” to initiate processing.
* The system processes the image and displays the blood group detection result.

**Workflow for Fingerprint Image Detection**

* The user clicks the “Upload Fingerprint Image” button.
* The file selection dialog opens, allowing the user to choose a fingerprint image.
* Once selected, the image is displayed in the preview section.
* The user clicks “Submit for Detection” to start the detection process.
* The system processes the fingerprint image and displays the blood group detection result.

**Conclusion**

The Input Design Document outlines the requirements and specifications for the input data for the Deep Learning-Based Blood Group Detection project. By adhering to these guidelines, the development team will ensure that the system accurately captures, validates, and processes input data, providing a seamless user experience and reliable results in blood group detection.

**OUTPUT DESIGN**

A quality output is one, which meets the requirements of the end user and presents the information clearly. In any system results of processing are communicated to the users and to other system through outputs. In output design it is determined how the information is to be displaced for immediate need and also the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system’s relationship to help user decision-making.

1. Designing computer output should proceed in an organized, well thought out manner; the right output must be developed while ensuring that each output element is designed so that people will find the system can use easily and effectively. When analysis design computer output, they should Identify the specific output that is needed to meet the requirements.

2. Select methods for presenting information.

3. Create document, report, or other formats that contain information produced by the system.

The output form of an information system should accomplish one or more of the following objectives.

* Convey information about past activities, current status or projections of the
* Future.
* Signal important events, opportunities, problems, or warnings.
* Trigger an action.
* Confirm an action.