Automated Health Information System

Foo Kai Yan - 33085625
Alicia Quek Chik Wen - 33045240
Eunice Lee Wen Jing - 33250979
Jesse Yow San Gene - 32794649

Supervised by: Dr Muhammad Fermi Pasha

Eunice Lee

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Introduction

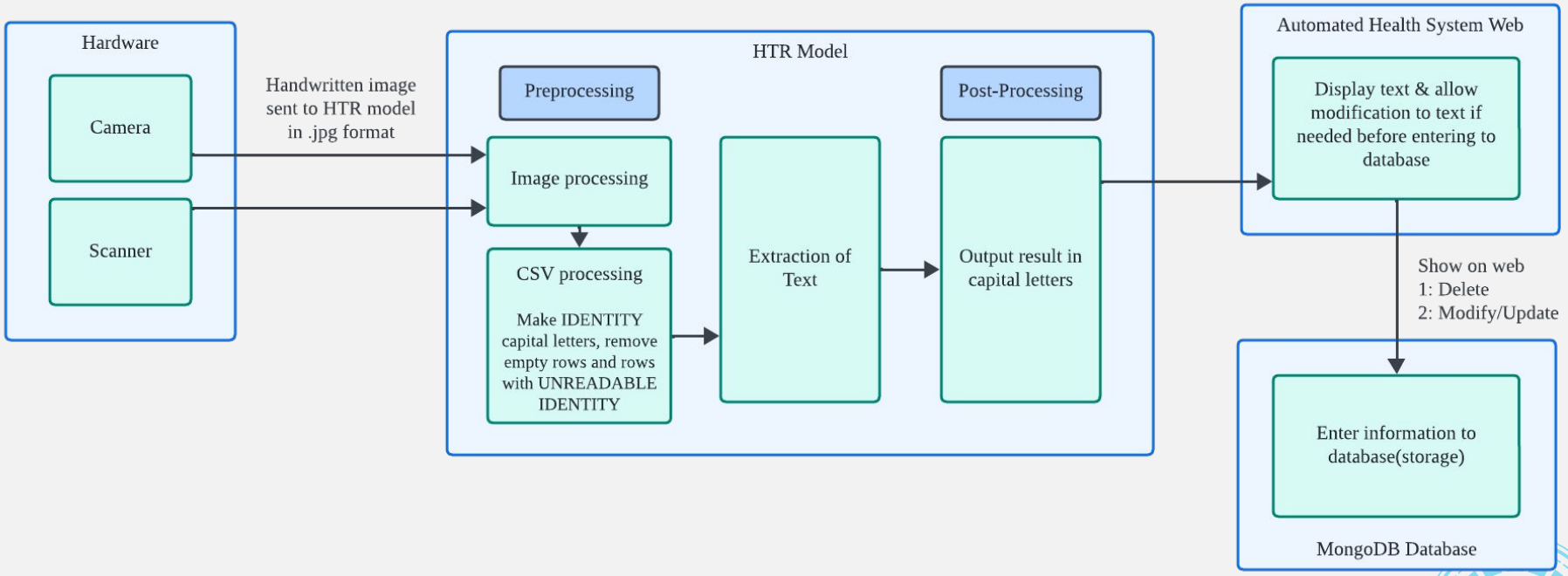
Short introduction

The focus of our project is on "Automated Health Information System", aimed at transforming the way healthcare data is managed and accessed. It incorporates a handwritten text recognition module to enhance efficiency and accuracy in data entry.

Project's goal

- Develop an automated health information system incorporating handwritten recognition modules to enhance data entry efficiency.
- Extend the system's web-based functionalities to seamlessly integrate with a mobile application platform.
- Implement a handwritten recognition system to allow healthcare professionals to input handwritten notes and prescriptions instantly.
- Expedite data entry tasks and improve user experience and productivity, leading to enhanced patient care outcomes.

Project Diagram Representation



Eunice Lee

UI Design - Registration Flow

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UI Design - Doctor's Appointment

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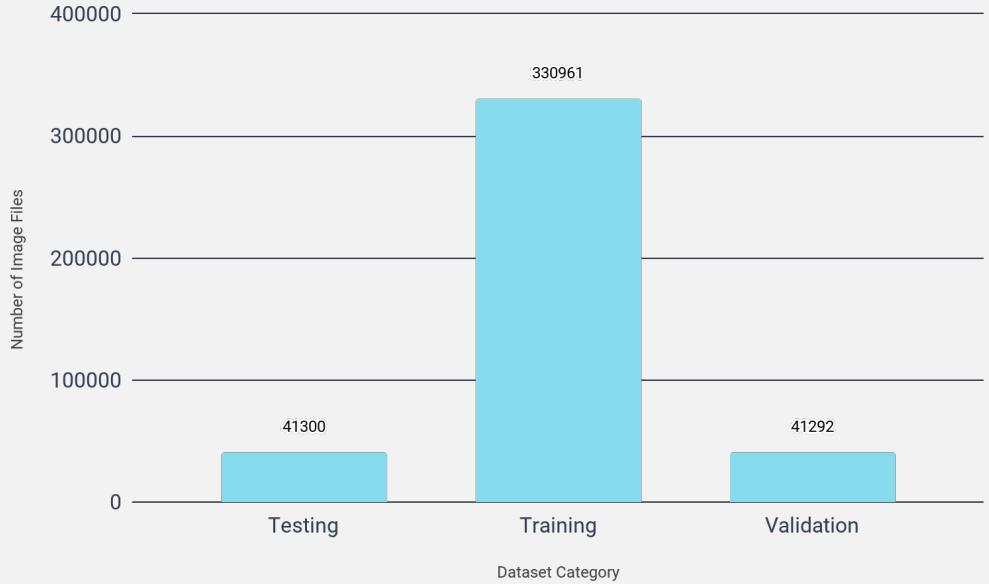
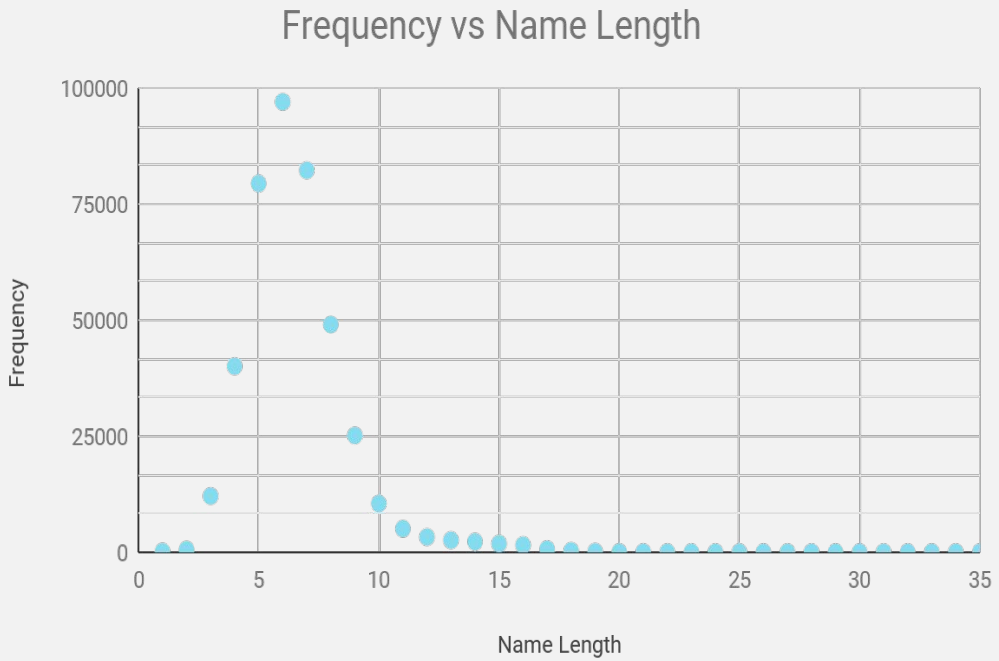
Project data: Distribution of Dataset

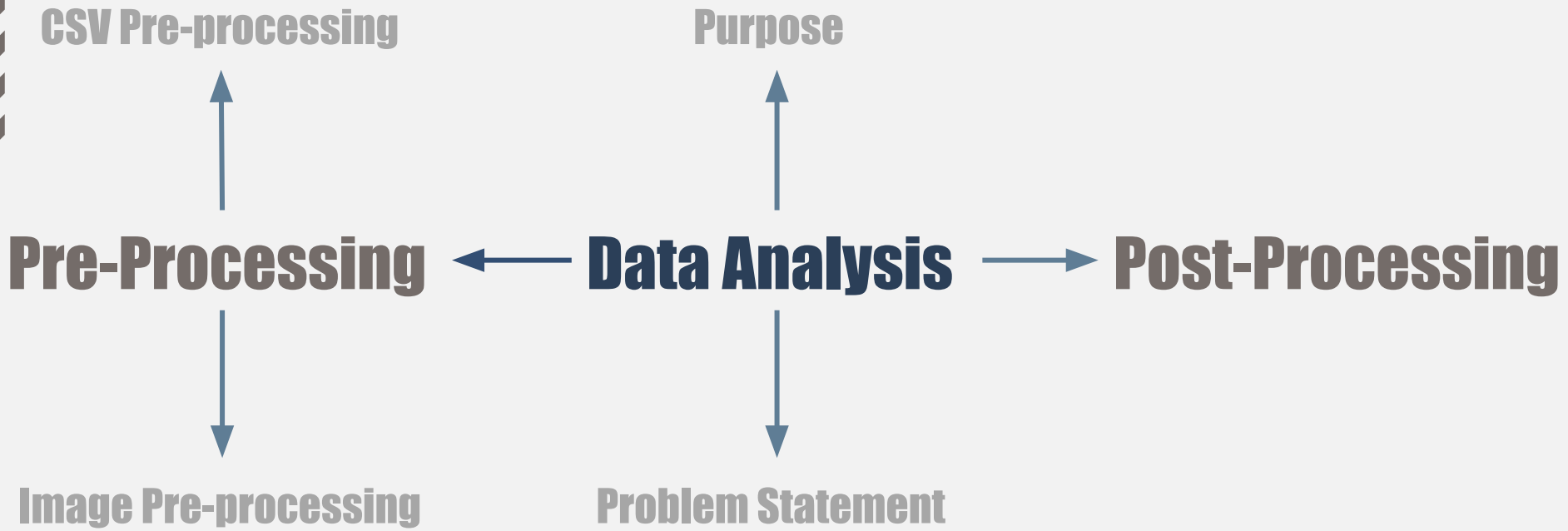


- Dataset breakdown by image count for training, validation, and testing dataset
- Training dataset notably contains a larger number of images than testing and validation dataset

Project data: Distribution of Text Length



- The scatter plot represents the frequency of name lengths
- Name lengths range from 1 character to 34 characters
- The most common name length observed is approximately 6 characters


CSV Pre-processing
Purpose
Pre-Processing
Data Analysis
Post-Processing
Image Pre-processing
Problem Statement

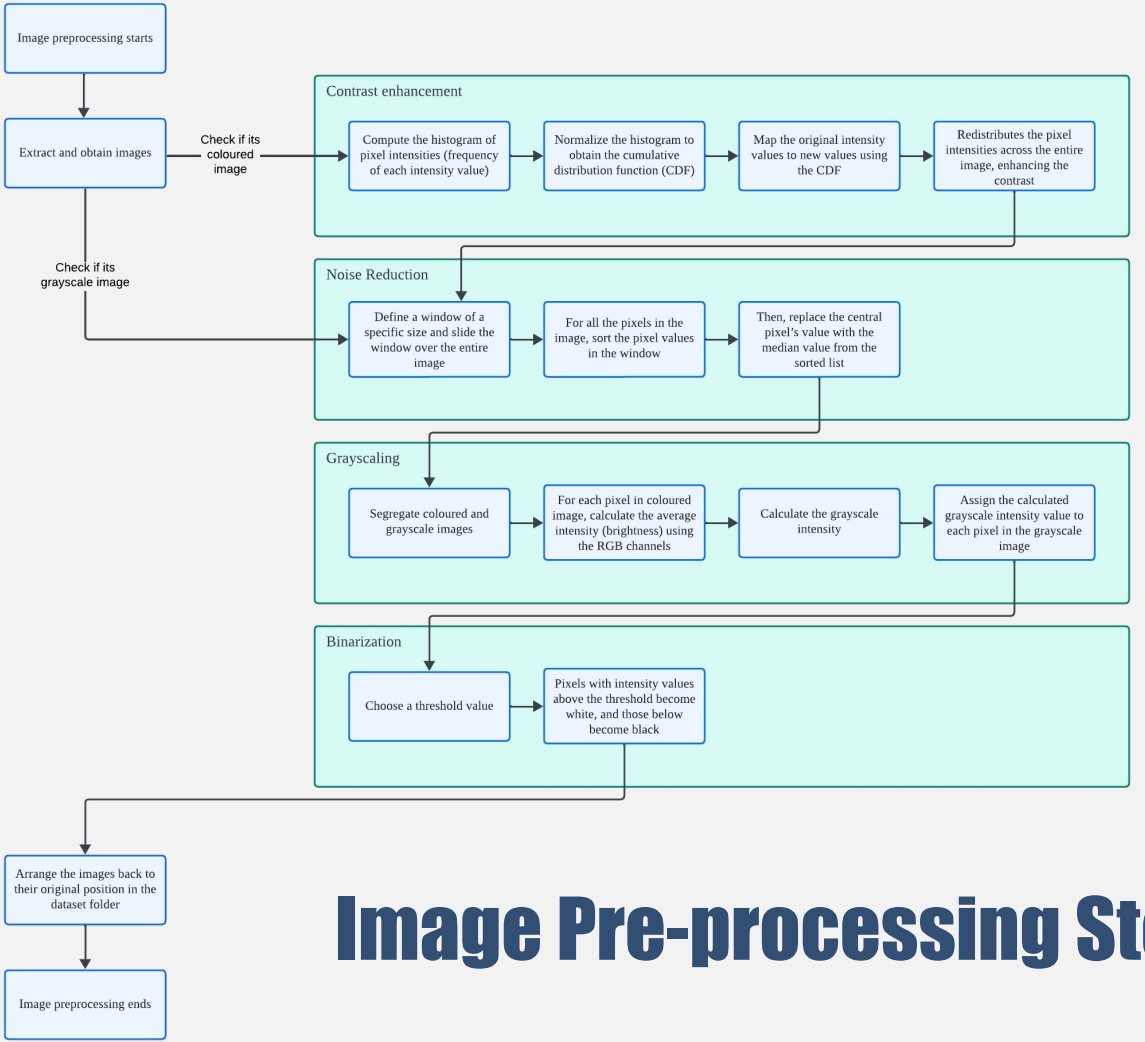
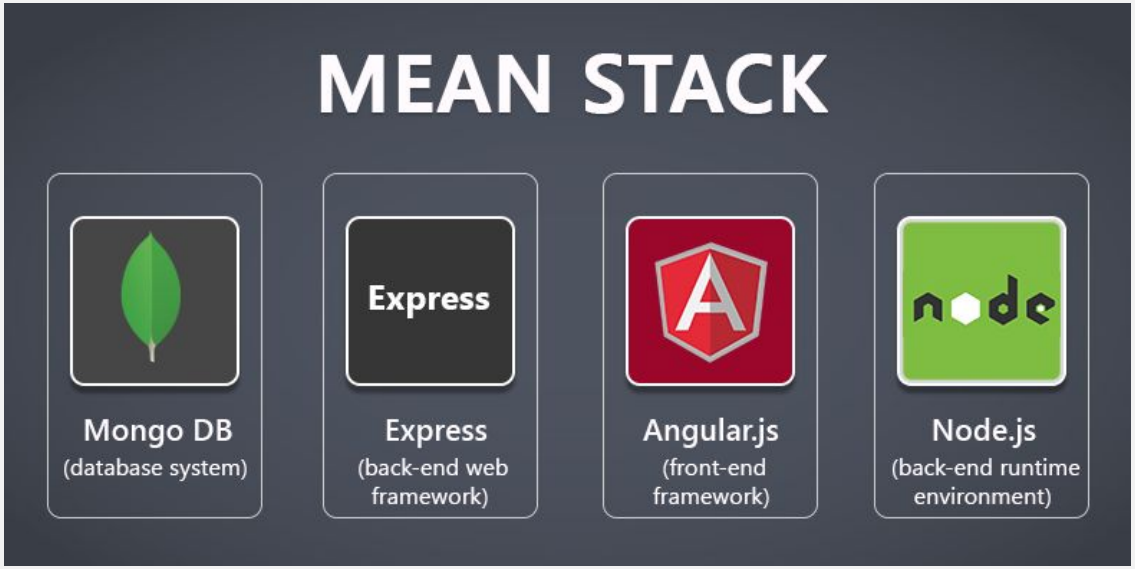


Image Pre-processing Steps

Foo Kai Yan

Software Specification

Software Framework



MongoDB:

- Store patients health data.

Express.js:

- Enable interaction between the frontend and the database.

Angular.js:

- Used to build user interfaces.

Node.js:

- Coordinate communication between front-end and back-end components.

Software Libraries

Machine Learning	Image Processing	Data Manipulation and Preprocessing
TensorFlow.js Keras	OpenCV	pandas matplotlib seaborn NumPy

Database system

MongoDB:

- Handle a wide variety of data formats
- Handles large volumes of data
- Handles high velocity of insertion

Programming Language environment

Visual Studio Code:

- Web-based development
- Handwritten Text Recognition Model

Jupyter Notebook:

- Data exploration and preprocessing purposes

Alicia Quek

Project management tool

GitLab

- Version Control
- Allow collaboration and coordination of work

Tools to keep track of:

- Project Progress
- Teams individual tasks workload
- Project Schedule

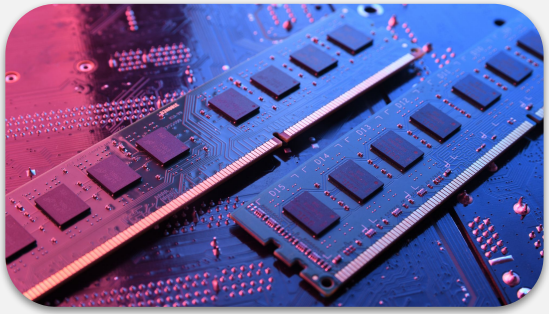
Trello

Project™ Libre
THE LEADING OPEN SOURCE PROJECT MANAGEMENT SOLUTION

Hardware Specifications

CPU: Intel i5/i7

- Multi cores that handles multiple tasks at the same time
- Enhances computational efficiency and speeds up model training for handwritten recognition



RAM: 16GB

- Efficient data processing and model training in our project
- Enables smooth handling of large datasets and enhances overall performance

GPU: Integrated graphics/RTX 3050

- Enhances graphical performance and accelerates machine learning tasks
- Offloads intensive computations from the CPU by accelerating model training and complex image processing.

Storage: SSD

- Quick data access and faster loading times
- Rapid access to project files, datasets, and code repositories.
- Efficient file management

Phone Camera

- Capture clear and detailed images of handwritten notes and documents
- Auto-focus and low-light performance enhance the quality and versatility of document scanning in various conditions.

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Background music from youtube

https://www.youtube.com/watch?v=1myDNkCtCpE

Figma UI Design https://www.figma.com/design/AxRQnYvoHnIDIDzjoMAcxo/HEALTH-INFOMATION-SYSTEM?node-id=0-1&t=vbtIybEnMAZ5nbl9-0

Thank you gif

https://giphy.com/explore/thank-you

Thanks!

Do you have any questions?

Jesse Yow