Project Documentation

1. Introduction

Project Title: AI-Based Historical Artifact Description System

Team Members:

- Frontend Developer
- Backend Developer
- Database Manager
- Testing & Deployment

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2. Project Overview

Purpose:

The purpose of this project is to help users identify historical artifacts by uploading an image and receiving a detailed description using AI.

Features:

- User Registration and Login
- Image Upload
- AI-based Artifact Identification
- Generated Historical Description
- User Dashboard

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3. Architecture

Frontend:

Developed using React. It allows users to interact with the system, upload images, and view results.

Backend:

Built using Node.js and Express.js. It handles user requests, processes images, and communicates with the AI model.

Database:

MongoDB is used to store user information and artifact data.

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4. Setup Instructions

Prerequisites:

- Node.js
- MongoDB

Installation:

- Download or clone the project
- Install required dependencies
- Configure environment variables
- Start frontend and backend servers

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5. Folder Structure

Client (Frontend):

Contains components, pages, and styling files.

Server (Backend):
Contains models, routes, controllers, and configuration files.

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6. Running the Application

- Start the backend server.
- Start the frontend application.
- Open the application in the browser.

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7. API Documentation

The backend provides APIs for:

- User Registration
- User Login
- Image Upload
- Fetching Artifact Description

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8. Authentication

- Uses token-based authentication (JWT).
- Passwords are encrypted for security.
- Protected routes ensure authorized access only.

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9. User Interface

The application includes:

- Login Page
- Registration Page
- Image Upload Page
- Result Display Page

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10. Testing

- API testing using tools like Postman.
- Manual testing of user interface.
- Input validation checks.

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11. Screenshots / Demo

Include screenshots of:

- Login Page
- Dashboard
- Image Upload
- Result Page

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12. Known Issues

- Slow response with weak internet.
- Large images may take more time to process.

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13. Future Enhancements

- Add mobile application version.
- Support multiple languages.
- Improve AI accuracy and speed.