Capstone Project

AI IMAGE GENERATOR PROJECT PLANNING DOCUMENT

Prepared for

ISI 490

Prepared by

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Executive Summary

This is an AI Image Generator that create an image from scratch based on a text description. This will help you convert your words, imagination into variety of digital art and illustrations all from text. This is a platform the uses machine learning to create art. It will use text prompts to describe the type of art you want to create.

Purpose

This platform can and will be widely accessed by everyone for learning purpose both inside and outside the educational sector for learning purpose.

Stakeholder List

The intended stakeholder for this project is the designers, developers, project managers, potential end users.

- **Project Manager**
  - The role of the PM is to make sure that the milestones and deliverables of the project are completed on time.
- **Developer**
  - Identify, prioritize and carry out tasks across the software development life cycle.
- **Web admin and End user**

Document convections

The following document conventions are used in this document.

Term/Convention	Meaning
User	An administrator, customer or an end user.
SLA	Service level Agreement
CSP	Cloud service provider
PM	Project Manager

Remote server and Database URL

Remote server Windows: ec2-100-26-209-167.compute-1.amazonaws.com
Database URL Ubuntu: http://54.146.65.34
Database URL Windows: https://100.26.209.167

Feasibility Analysis:

This is a challenging and complex project that requires significant technical expertise in the field of artificial intelligence and machine learning. The feasibility of the project will depend on several factors, including the availability of data, computational resources, and technical skills.

Data Availability:

One of the critical factors in the feasibility of this project is the availability of data. The project requires a large amount of high-quality data to train the AI model. If the data is not available or not in sufficient quantity, the project may not be feasible.

Computational Resources:

Another essential factor in the feasibility of the project is the availability of computational resources. The project requires a lot of computational power to train the AI model. If the necessary computational resources are not available, the project may not be feasible.

Technical Skills:

The project requires a high level of technical expertise in the field of artificial intelligence and machine learning. The team must have sufficient technical skills and experience to complete the project successfully. If the team does not have the necessary technical expertise, the project may not be feasible.

Risk Assessment:

The AI image generator capstone project is a complex project that involves several risks. The risk assessment for the project should focus on the potential risks associated with the development, deployment, and operation of the AI image generator.

Technical Risk:

The project involves significant technical risks, including issues related to data quality, algorithm development, and system integration. These risks could lead to delays in the project or cause the project to fail altogether.

Operational Risks:

The project involves operational risks, including issues related to system maintenance, data management, and security. These risks could result in system downtime, data breaches, and other operational issues that could impact the project's success.

Financial Risks:

The project involves significant financial risks, including the cost of computational resources, data acquisition, and system integration. These risks could result in budget overruns, project delays, or the inability to complete the project.

Conclusion:

The AI image generator capstone project is a complex and challenging project that requires significant technical expertise and resources. The feasibility of the project will depend on several factors, including the availability of data, computational resources, and technical skills. The project also involves several risks, including technical, legal and ethical, operational, and financial risks. A comprehensive feasibility analysis and risk assessment are necessary to ensure the successful completion the project.

Project Work Plan:

1. **Project Initiation:** This phase involves defining the project scope, objectives, and deliverables, identifying project stakeholders, and establishing the project team.

2. **Data Collection and Preparation:** This phase involves identifying and collecting the necessary data to train the AI model, preparing the data for use in the AI image generator, and addressing any data quality or privacy issues.

3. **Algorithm Development:** This phase involves developing and testing the AI algorithms that will be used in the image generator. The algorithms should be designed to optimize image quality, speed, and efficiency.

4. **Model Training:** This phase involves training the AI model using the collected and prepared data. The model should be tested and refined until it produces high-quality images that meet the project requirements.

5. **Integration and Testing:** This phase involves integrating the AI image generator into a software system and testing the system to ensure it meets the project requirements. The system should be tested for performance, scalability, and reliability.

6. **Deployment and Maintenance:** This phase involves deploying the AI image generator to production and maintaining the system to ensure it continues to meet the project requirements. The system should be monitored for performance, and updates should be made as necessary to address any issues that arise.

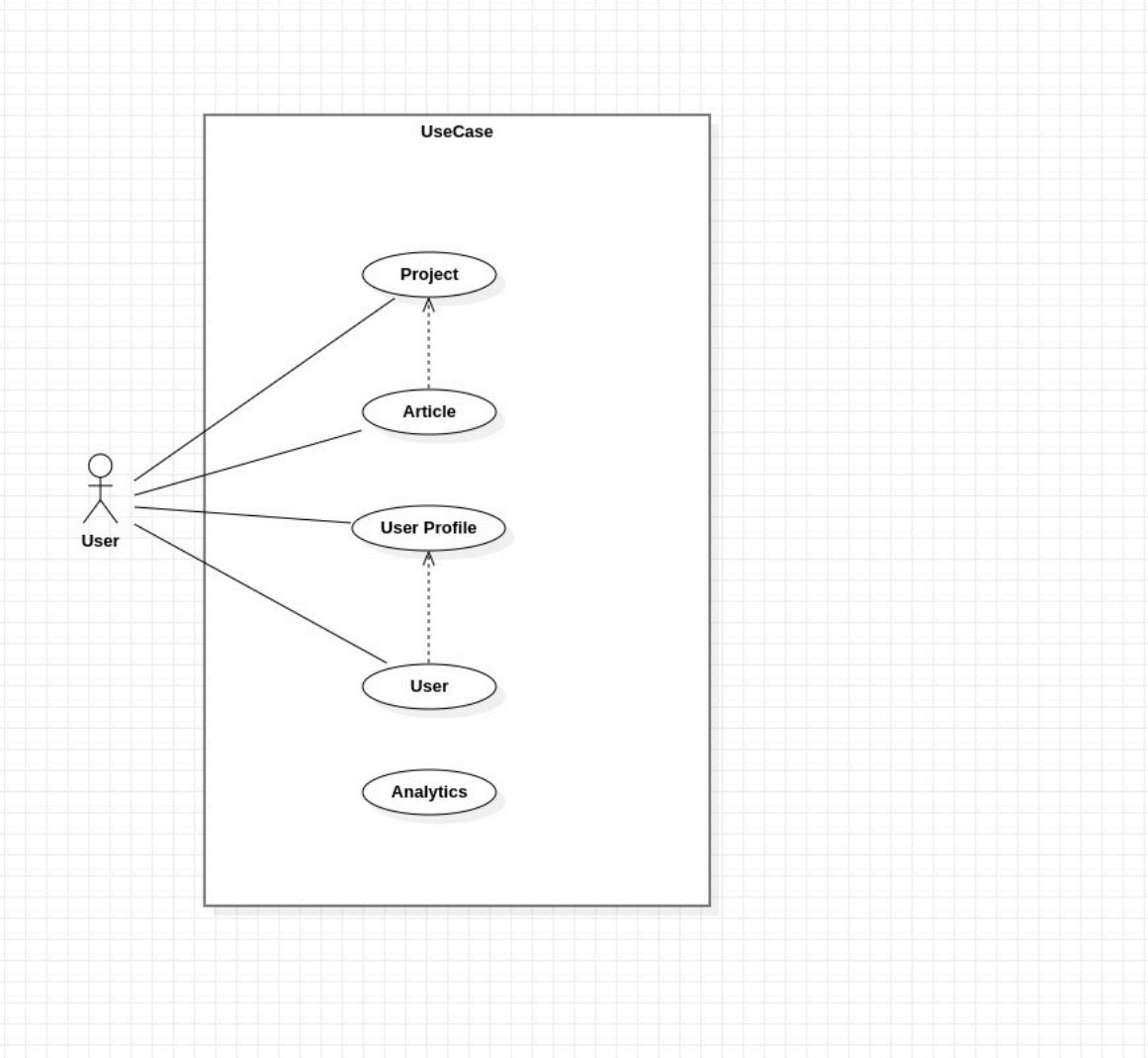
Milestones:

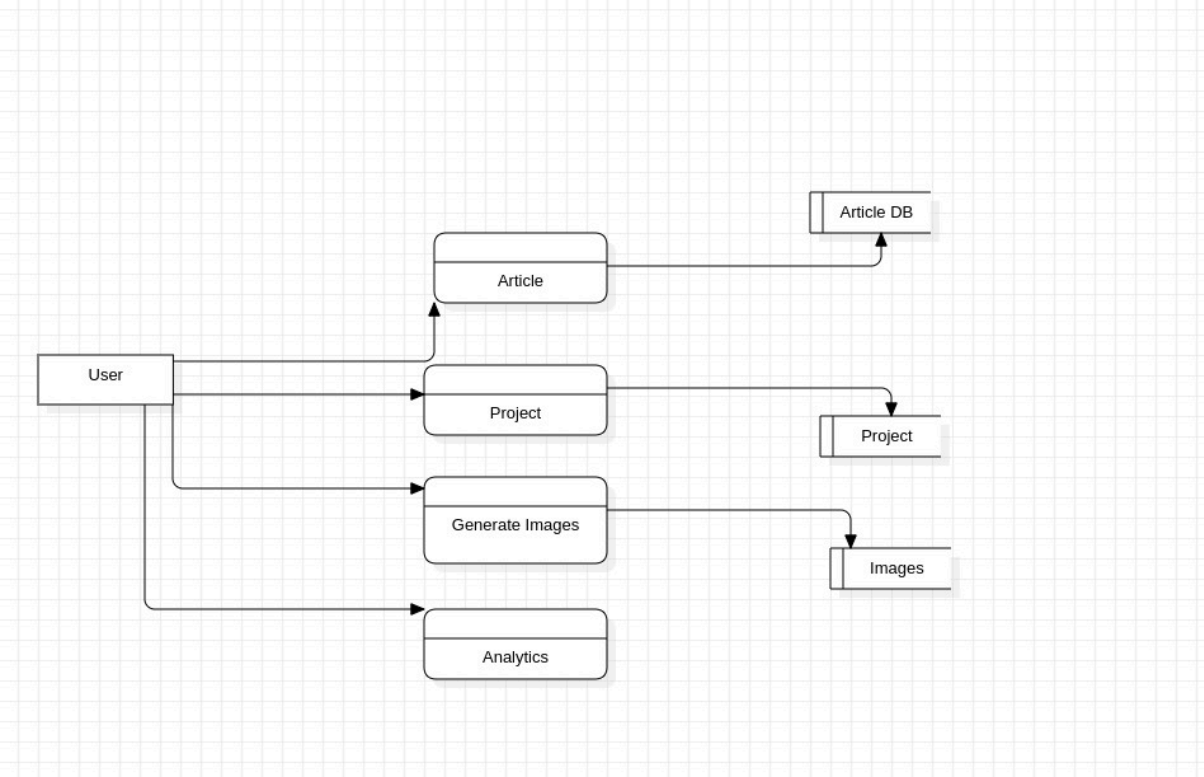
1. Project scope, objectives, and deliverables defined.
2. Data collection and preparation completed.
3. Algorithm development completed.
4. AI model trained and refined.
5. AI image generator integrated and tested.
6. AI image generator deployed to production and maintained.

Gantt Chart:

Task	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Analysis & Requirements Gathering														
System Design														
Front-end Development														
Back-end Development														
Integration & Testing														
Deployment & Launch														
Maintenance & Support														Ongoing

Use case Model:

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Project
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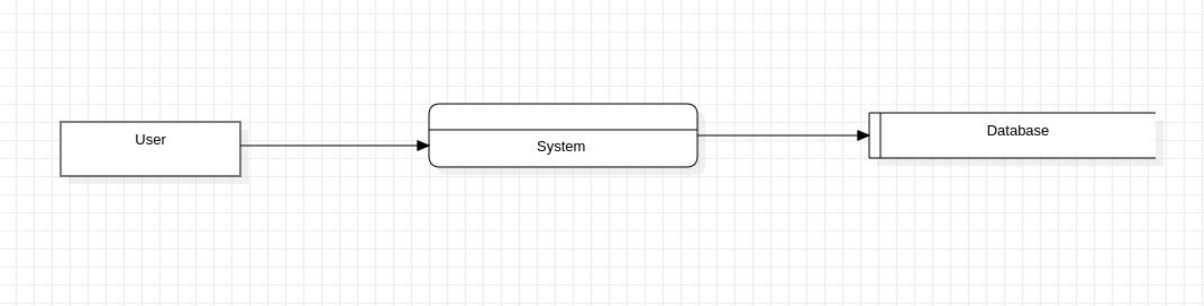
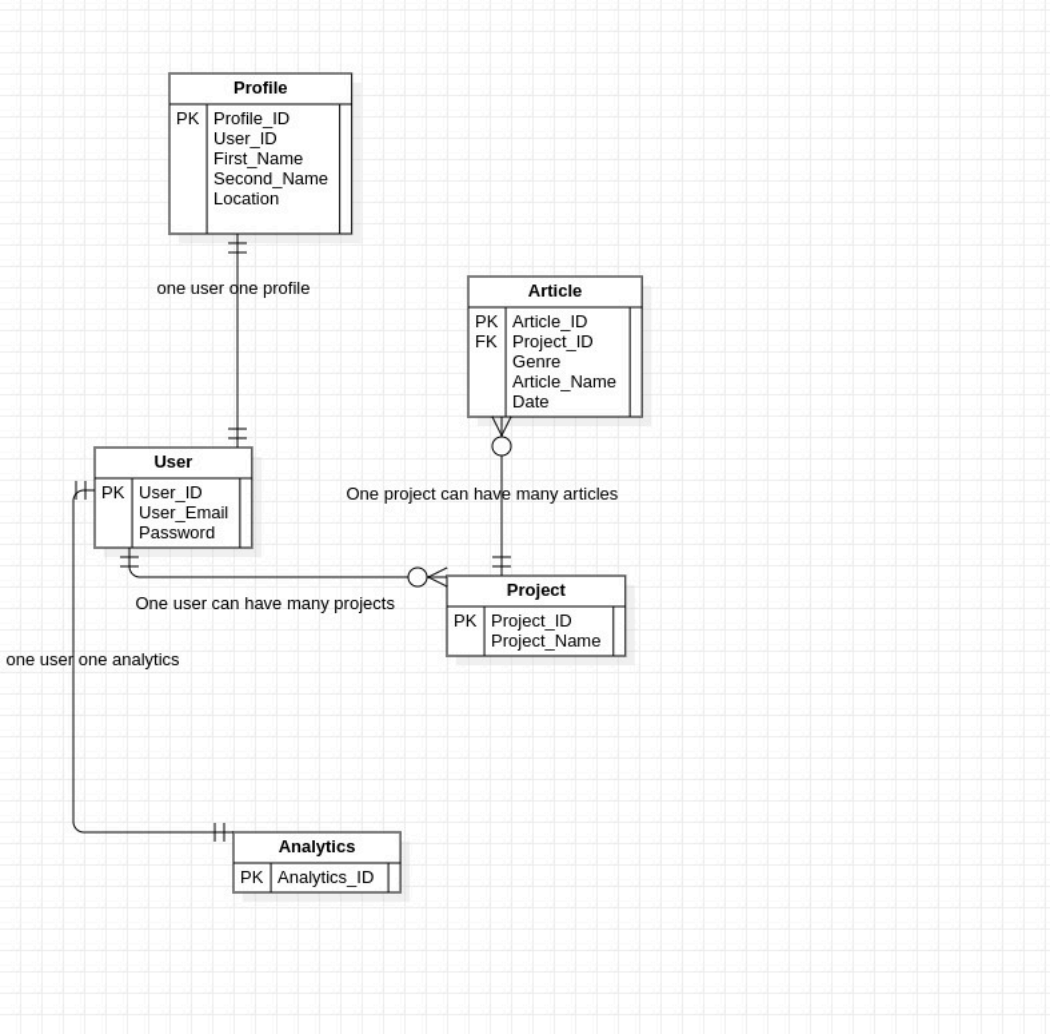
Generate Images
Images
Analytics


User
System
Database

ERD:


Profile
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Article
PK
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Genre
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Date
User
PK
User_ID
User_Email
Password
One project can have many articles
One user can have many projects
Project
PK
Project_ID
Project_Name
one user one analytics
Analytics
PK
Analytics_ID