# Project Proposal 2: Iconographer

Iconographer: Saint Recognition and Storytelling Using a Custom Generation System

## Objective

This project aims to develop an AI system capable of recognizing Christian saints from images and generating informative narratives about their lives and significance. By combining image classification with a custom-built knowledge-based generation system, the project will offer both recognition and educational content.

## Dataset

- Source: Curated image collections of Christian iconography (Wikimedia Commons, public art archives)  
- Scope: Approx. 30–50 saints  
- Format: High-quality images of icons and artistic depictions.  
- Data Augmentation: Rotation, flipping, color adjustment to expand dataset.

## ML Tasks

1. Image Classification:  
 - Model: CNN architecture (ResNet, MobileNet, or similar)  
 - Output: Predicted saint name from the input image.  
  
2. Language Generation:  
 - Model: Custom-built generation system based on a manually created knowledge base  
 - Output: Generate a short biography or description of the saint, including their historical background, significance, and feast day.

## Pipeline

1. User uploads an image of a saint.  
2. The classification model predicts the saint's identity.  
3. The saint's name is used to retrieve a description from the custom-built knowledge base.  
4. The system generates an informative description about the saint.

## Evaluation

- Classification Model: Accuracy, Precision, Recall.  
- Description Output: Human evaluation of factual correctness and quality.

## Improvement Plan

- Hyperparameter tuning for improved model accuracy.  
- Dataset expansion and cleaning.  
- Expanding and refining the knowledge base for better storytelling quality.

## Deliverables

- Fully trained classification model.  
- Custom generation system based on knowledge base.  
- Image-to-description pipeline.  
- Final report and presentation.