

# End-to-End Training Pipeline Document

This document describes the complete pipeline to train the proposed model referenced in the provided files.

It is structured so that an agentic coding tool can follow it step-by-step.

## 1. Problem Definition

Define the task objective, input modality, output targets, and evaluation metrics.

## 2. Dataset Preparation

- Identify dataset source and licensing
- Perform data cleaning and normalization
- Split into train, validation, and test sets

## 3. Model Architecture

- Backbone selection
- Input/output layers
- Loss functions
- Optimization strategy

## 4. Training Pipeline

- Environment setup
- Hyperparameter configuration
- Training loop
- Checkpointing strategy

## 5. Evaluation

- Validation metrics
- Error analysis

- Ablation studies

## 6. Inference and Deployment

- Model export
- Runtime optimization
- Integration pipeline

## 7. Automation Using Agentic Tools

- Task decomposition
- Tool orchestration
- Logging and monitoring

This document is intended to be directly converted into executable tasks by an agentic framework.