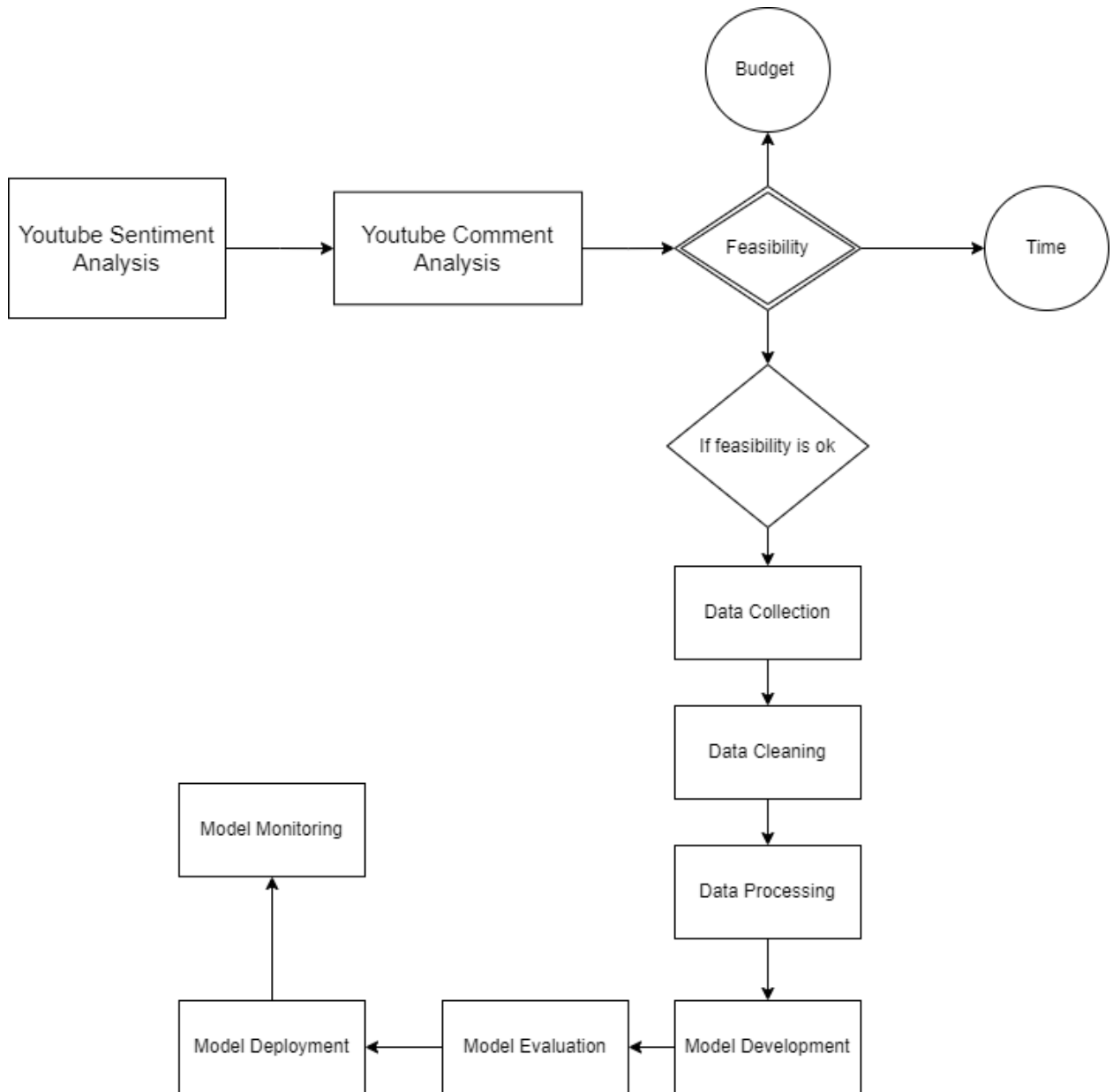1. Youtube Comment sentiment analysis :

Figure : Block Diagram of Youtube Comment Sentiment Analysis

Here I discuss the step of You Tube comments sentiment analysis :

You tube sentiment analysis :

Purpose: Understand the project's goals, scope, and deliverables.
Tasks:
Identify the target problem (e.g., sentiment analysis, text summarization).

Feasibility Check

Purpose: Assess if the project is viable given the constraints and resources.
Tasks:
Check data availability and quality.
Evaluate computational resources and budget.
Identify risks and limitations

Set Timeline Phase by Phase

Purpose: Break the project into manageable phases with realistic deadlines.
Tasks:
Create a timeline for data collection, processing, modeling, and deployment.
Assign roles and responsibilities.

If Feasible, Design Data Collection Methodology

Purpose: Plan how to gather relevant data for the system.
Tasks:
Define sources
Ensure ethical and legal compliance.
Plan data labeling if supervised learning is required.

Data Cleaning/Transformation

Purpose: Prepare raw data for analysis.
Tasks:
Handle missing values, duplicates, and irrelevant information.
Normalize text (e.g., lowercase, punctuation removal).
Tokenize, lemmatize, or stem text.
Remove stop words or noise (e.g., HTML tags).

Data Processing

Purpose: Convert cleaned data into a format suitable for modeling.
Tasks:
Feature extraction (e.g., Bag of Words, TF-IDF).
Encode categorical variables.
Split data into training, validation, and testing sets.

Model Development

Purpose: Build a model to solve the NLP task.
Tasks:
Choose algorithms (e.g., traditional ML, deep learning).
Train models using processed data.
Fine-tune hyperparameters for optimal performance.

Model Evaluation

Purpose: Validate the model's performance and robustness.
Tasks:
Use metrics (e.g., accuracy, F1 score, precision, recall) to evaluate.
Perform cross-validation or test on unseen data.
Analyze error cases and refine the model as needed.

Model Deployment & Monitoring

Purpose: Implement the model into production and ensure it works as intended.
Tasks:
Deploy the model to an API, web app, or embedded system.
Monitor performance over time for drift or degradation.
Collect feedback and retrain the model periodically.
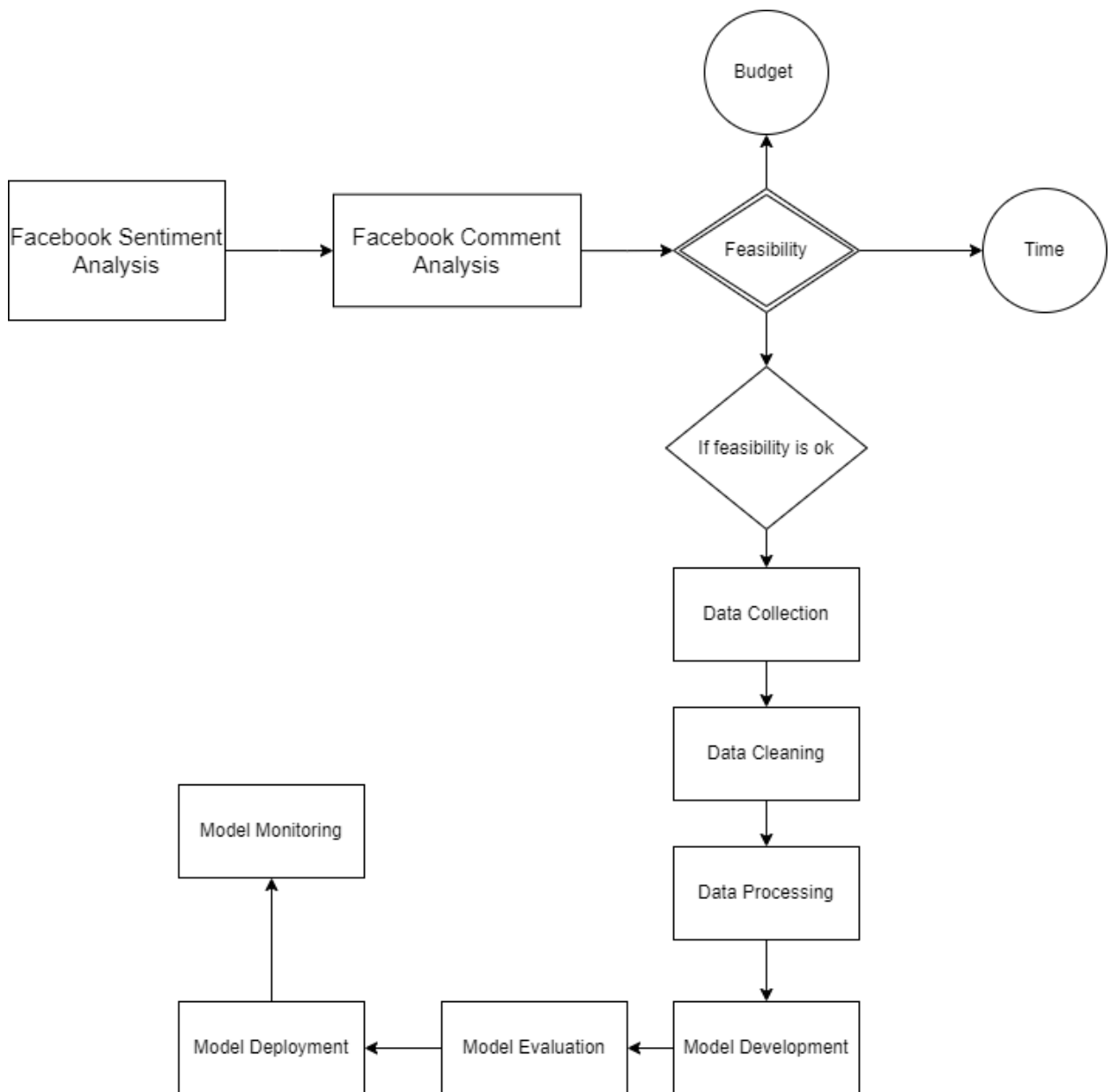
2. Facebook comment sentiment analysis :

Figure : Block Diagram of Facebook Comment Sentiment Analysis

Here I discuss the step of Facebook comments sentiment analysis :

Facebook sentiment analysis :

Purpose: Understand the project's goals, scope, and deliverables.
Tasks:
Identify the target problem (e.g., sentiment analysis, text summarization).

Feasibility Check

Purpose: Assess if the project is viable given the constraints and resources.
Tasks:
Check data availability and quality.
Evaluate computational resources and budget.
Identify risks and limitations

Set Timeline Phase by Phase

Purpose: Break the project into manageable phases with realistic deadlines.
Tasks:
Create a timeline for data collection, processing, modeling, and deployment.
Assign roles and responsibilities.

If Feasible, Design Data Collection Methodology

Purpose: Plan how to gather relevant data for the system.
Tasks:
Define sources
Ensure ethical and legal compliance.
Plan data labeling if supervised learning is required.

Data Cleaning/Transformation

Purpose: Prepare raw data for analysis.
Tasks:
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Purpose: Convert cleaned data into a format suitable for modeling.
Tasks:
Feature extraction (e.g., Bag of Words, TF-IDF).
Encode categorical variables.
Split data into training, validation, and testing sets.

Model Development

Purpose: Build a model to solve the NLP task.
Tasks:
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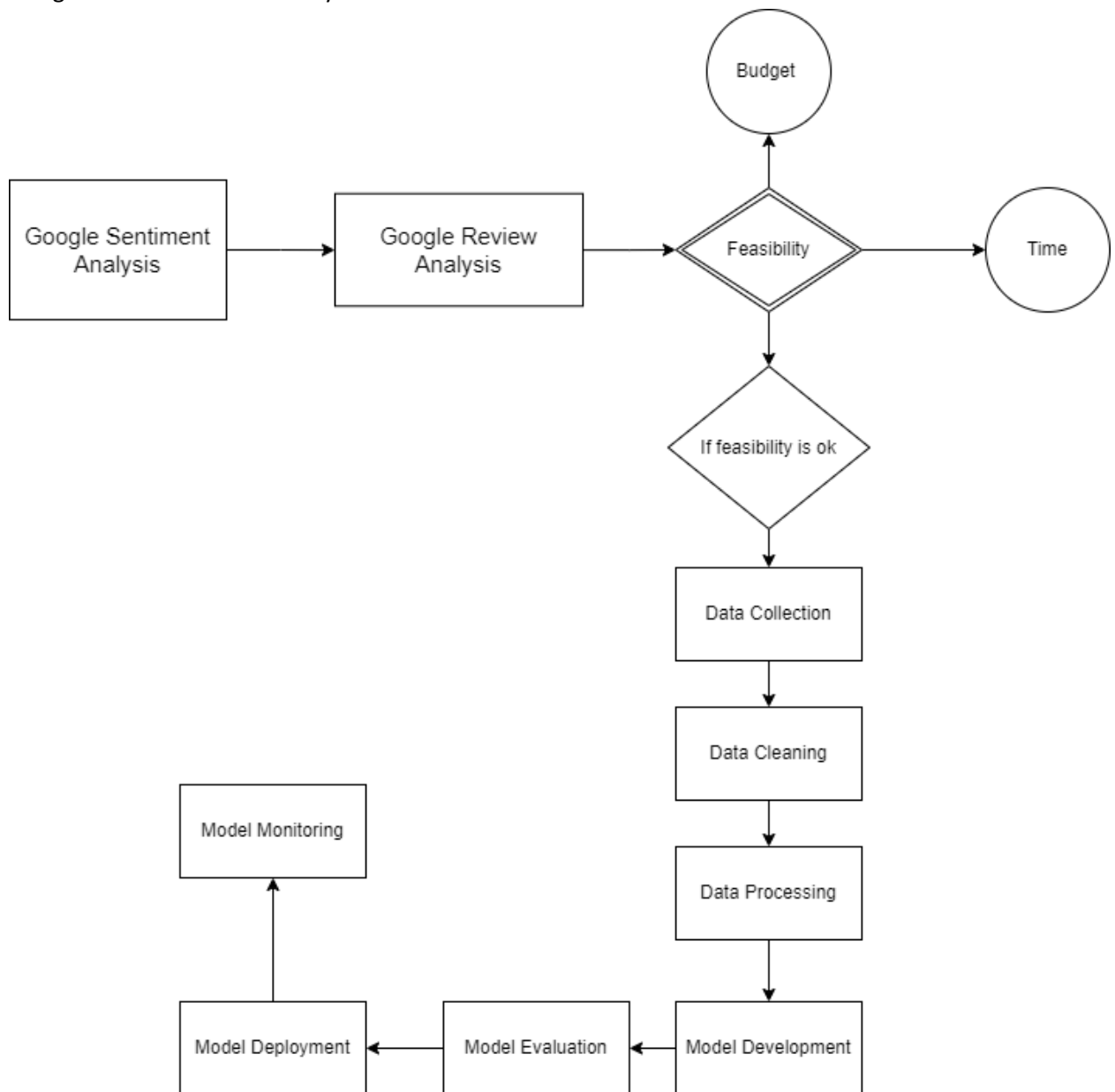
3. Google review sentiment analysis

Figure : Block Diagram of Google Review Sentiment Analysis

Here I discuss the step of Google review sentiment analysis :

Google sentiment analysis :

Purpose: Understand the project's goals, scope, and deliverables.
Tasks:
Identify the target problem (e.g., sentiment analysis, text summarization).

Feasibility Check

Purpose: Assess if the project is viable given the constraints and resources.
Tasks:
Check data availability and quality.
Evaluate computational resources and budget.
Identify risks and limitations

Set Timeline Phase by Phase

Purpose: Break the project into manageable phases with realistic deadlines.
Tasks:
Create a timeline for data collection, processing, modeling, and deployment.
Assign roles and responsibilities.

If Feasible, Design Data Collection Methodology

Purpose: Plan how to gather relevant data for the system.
Tasks:
Define sources
Ensure ethical and legal compliance.
Plan data labeling if supervised learning is required.

Data Cleaning/Transformation

Purpose: Prepare raw data for analysis.
Tasks:
Handle missing values, duplicates, and irrelevant information.
Normalize text (e.g., lowercase, punctuation removal).
Tokenize, lemmatize, or stem text.
Remove stop words or noise (e.g., HTML tags).

Data Processing

Purpose: Convert cleaned data into a format suitable for modeling.
Tasks:
Feature extraction (e.g., Bag of Words, TF-IDF).
Encode categorical variables.
Split data into training, validation, and testing sets.

Model Development

Purpose: Build a model to solve the NLP task.
Tasks:
Choose algorithms (e.g., traditional ML, deep learning).
Train models using processed data.
Fine-tune hyperparameters for optimal performance.

Model Evaluation

Purpose: Validate the model's performance and robustness.
Tasks:
Use metrics (e.g., accuracy, F1 score, precision, recall) to evaluate.
Perform cross-validation or test on unseen data.
Analyze error cases and refine the model as needed.

Model Deployment & Monitoring

Purpose: Implement the model into production and ensure it works as intended.
Tasks:
Deploy the model to an API, web app, or embedded system.
Monitor performance over time for drift or degradation.
Collect feedback and retrain the model periodically.