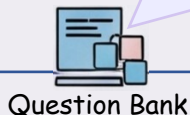


Phase 1

Data Extraction and Preprocessing

Given a set of data points, how can you use the method of least squares to estimate the parameters of a linear model, and explain why this method gives the best linear unbiased estimate (BLUE)?



Question Bank

Multi-dimensional Labeling

Clustering-Based Question Selection

Quality-Prioritized Sampling

Discipline Labeling

Discipline Labeling

Reasoning-Oriented Filtering

Quality Assessment

Text Preprocessing

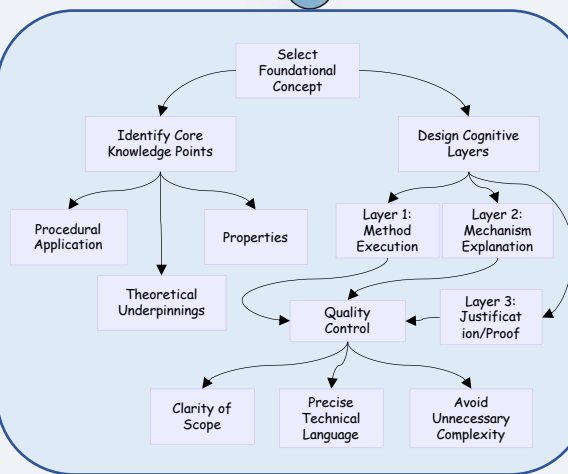
Web Corpus

Book Corpus

Phase 2

Core Synthesis

Design Logic Extraction



Design Logic Deduplication

Two-stage Design Logic Retrieval



Question Synthesis

Given an imbalanced dataset, how do you implement Focal Loss in CNN? Explain why Focal Loss converges faster than Weighted Cross-Entropy when the class boundaries are fuzzy (there are many hard examples).

Phase 3

Filtering and Output



Question Deduplication

Question Decontamination



Response Synthesis

<think>
We are going to implement Focal Loss in a CNN for an imbalanced dataset.
...
</think>
Implementing Focal Loss in a CNN for Imbalanced Datasets
...
- ****Use Case:**** Ideal for object detection, medical imaging, or any task with class imbalance + ambiguous samples.