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AUTOMATIC INDEX CREATION

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Introduction to the Problem Statement



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- Indexes are crucial for efficient query execution in relational databases.
- However, developers sometimes forget to create indexes for frequently queried columns.
- This can lead to repeated full relation scans, significantly degrading performance.
- **Goal:** Modify the application layer of PostgreSQL to detect such patterns and automatically create indexes when beneficial.
- Approach:
 - Track full relation scans with equality predicates.
 - Estimate the potential benefit of an index.
 - Automatically trigger index creation if estimated benefit outweighs the cost.

Directory Structure



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Here is the directory structure of the submission: