

Annotative Indexing – Abstract

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Abstract

This talk presents and explores annotative indexing, a novel framework that unifies and generalizes traditional inverted indices, column stores, object stores, and graph databases. As a result, annotative indexing can provide the underlying indexing framework for retrieval systems that integrate sparse retrieval, dense retrieval, entity retrieval, knowledge graphs, and semi-structured data. While our reference implementation primarily supports human language data in the form of text, annotative indexing is sufficiently general to support a wide range of other data types. The talk will include examples of SQL-like queries over a JSON store built on our reference implementation that include numbers and dates. Taking advantage of the flexibility of annotative indexing, the talk will also demonstrate a fully dynamic inverted index incorporating support for ACID properties of transactions with hundreds of multiple concurrent readers and writers.

Declaration on Generative AI

The author(s) have not employed any Generative AI tools.