

Generalized Search Trees

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What is GiST?

How is GiST different?

Why GiST?

Implementation of GiST

GiST Definition

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- ▶ Data Structure that can be used to build a variety of height-balanced search trees.
- ▶ Makes no assumptions about type of data being stored or queries being serviced
- ▶ Allows easy implementations of well known indexed trees like B+-Trees, R-Trees

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- ▶ GiST Functions
 - ▶ GiST can work with any arbitrary predicate and data type (with any number of free variables)

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- ▶ Allows the easy evolution of a database system to support new tree-based indexes
- ▶ Allows developers to focus on new features of index types without becoming experts in database system internals

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- ▶ $condenseTree :: GiST \rightarrow Node \rightarrow GiST$

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