

Synthesizing Database Kernels — The Next Frontier (Keynote Talk)

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Abstract

Coding agents are reshaping how databases are built. We already see people starting to synthesize peripheral elements of their data stack: connectors, pipelines, presentation layer, creating bespoke specialized solutions. Database kernels are the natural next step. What used to require scarce resources of database internals experts is becoming possible for wide audiences of developers. But synthesizing core database components is scary; there need to be strong guarantees around correctness, transactional consistency, performance, and scalability. This is where harnesses play an outsized role. What are the traits of such harnesses, and how can database systems be composed in this new world?

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Speaker Biography: Benjamin is the CEO at Firebolt. He works with the teams on building the fastest and most cost-effective analytical query engine for engineers and agents. Recently, much of that work has focused on synthesizing full database components with coding agents. Benjamin first fell in love with database systems while studying computer science at the Technical University of Munich.

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