Ph: 9585554590, 9585554599
Email: support@salemsmartreach.com
URL: www.salemsmartreach.com

PrefDB: Supporting Preferences as First-Class Citizens in Relational Databases

Abstract:

In this paper, we argue that preference-aware query processing needs to be pushed closer to the DBMS. We introduce a preference-aware relational data model that extends database tuples with preferences and an extended algebra that captures the essence of processing queries with preferences. Based on a set of algebraic properties and a cost model that we propose, we provide several query optimization strategies for extended query plans. Further, we describe a query execution algorithm that blends preference evaluation with query execution, while making effective use of the native query engine. We have implemented our framework and methods in a prototype system, PrefDB.PrefDB allows transparent and efficient evaluation of preferential queries on top of a relational DBMS. Our extensive experimental evaluation on two real-world datasets demonstrates the feasibility and advantages of our framework.