



Dissertation Defense

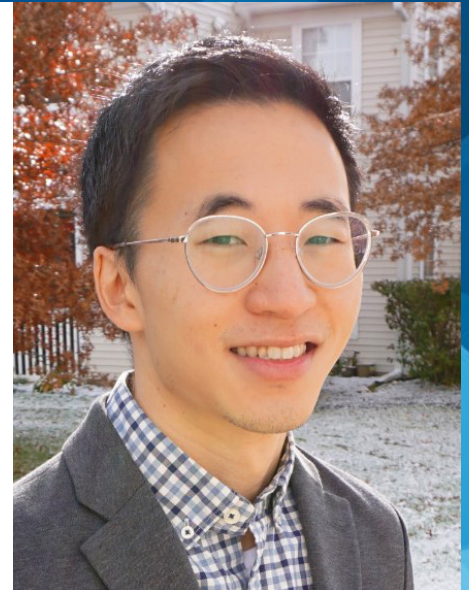
Christopher Baik

Clarifying Oblique Specifications of Relational Queries

Friday, March 13, 2020

11:00 am – 1:00 pm

3725 Beyster Bldg.



ABSTRACT: While there is abundant access to data management technology today, working with data is still challenging for the average user. One common means of manipulating data is with SQL on relational databases, but this requires knowledge of SQL as well as the database's schema and contents. Consequently, previous work has proposed oblique query specification (OQS) methods such as natural language or programming-by-example to allow users to imprecisely specify their query intent. These methods, however, generally sacrifice precision at the cost of accessibility, suggesting a need for more refined interaction models to make OQS methods practically usable.

In this thesis, I present a series of mechanisms to clarify OQS methods. First, I demonstrate how to leverage previously-issued SQL queries to improve the accuracy of natural language interfaces. Second, I propose a system allowing users to specify a query with both natural language and programming-by-example. Finally, I develop a system where users provide feedback on system-suggested tuples to select a SQL query from a set of candidate queries generated by an OQS system.

Chairs: Profs. Michael Cafarella and HV Jagadish