Travel Grant Application Statement

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Research Summary

I work on local differential privacy and its application in marginal release (CCS'18) and location privacy (TDSC'18).

These problems have practical values: Google's Chrome browser includes code that deploys the RAPPOR protocol, to collect answers to questions such as default homepage, etc. Apple had also deployed similar techniques. With local differential privacy, it is possible to collect data that was inaccessible because of privacy issues. Moreover, the increased amount of data will significantly improve the performance of some learning tasks.

Besides, I also study the co-design of local differential privacy and mechanism design (TIFS'18). Considering the strategical behavior of data owners, data collector can provide data owners rewards to induce them choose lower privacy preserving level to improve data utility. I was interested in the broad aspect of theoretical computer science when I was in undergraduate school, and designed several algorithms.

Motivation

I will definitely benefit from participating in the symposium. Among the many motivating reasons, here I list three most important ones.

First, I can introduce good ideas to the community. As a fifth-year Ph.D. student, this is a gold opportunity to sell and absorb ideas.

Second, I can see good quality papers: The conference attracts the best security papers. This year, some are already public. I have read and been inspired by some of the related papers. I can better understand the great ideas by listening to talks and chatting with the authors.

Third, I can network with researchers: At the world's most prestigious security symposium, I can meet with many famous professors and students. I can also introduce myself to the community, which is the key to the success of my future career.

I would like to thank the committee for the consideration of my application for the Student Travel Grant and would really appreciate it if the committee could approve it.

Expected Expense

• Registration: 680 USD (850 CAD).

• Airfare: 500 USD

• Lodging: 500 USD (including local transportation and food; plan to share a room with others)