Abigail Gentle

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LinkedIn

Education

07/2023-Present– PhD at the University of Sydney

Presently working on my PhD exploring new error bounds in local differential privacy, Differential privacy is a statistical tool for robust, quantifiable and provable privacy guarantees in data analysis. Presently working on distinguishing order-optimal algorithms by their empirical performance, new amplification results for the shuffle model.

Deep interest in research collaboration on differential privacy, trust, randomised algorithms and statistics.

12/2022-2/2023 –   Engineering Vacation Research Internship Program
Scholarship recipient

"Fast Parsing CFGs" an investigation into the fastest method for parsing context free grammars using a reduction to Boolean matrix multiplication, motivated by advances in matrix multiplication tools and techniques.

2018-2022 – Bachelor of Science (Computer Science) and Advanced Studies (Philosophy) (Honours)
Graduated with first class honours
Dean's List of Excellence in Academic Performance for 2020

Completed my thesis *Differential Privacy in the Group Shuffle Model,* where I quantified the privacy loss of distinguishable groups in the existing shuffle model of differential privacy.

2012-2017 – Ryde Secondary College

Extracurricular Activities and Volunteering

Sydney University Rock Climbing and Mountaineering Club
2019-2021 – Membership Officer and Trips officer
2021/2022 – President
Full responsibility for the club and its outdoor trips, managing finances and insurance, organising the committee, running meetings, delegating tasks, and keeping the club active and organised.
2022-2023 – Secretary

Previous Work

KG2 Agricultural Research – Researcher and Software Engineer (10/02/2023 – 01/09/2023)
Responsible for research and development of machine vision, satellite crop and paddock detection programs, data analysis and management, and product design and deployment. Responsible for a small research team exploring statistical forecasting.