Eugenie Y. Lai

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Education

University of British Columbia, Vancouver, BC, Canada — September 2015-Present
Bachelor of Commerce — Graduation: May 2021
Specialization: Combined Major of Business and Computer Science with Coop
GPA: 3.99/4.0

Awards

2020 Natural Sciences and Engineering Research Council of Canada (NSERC) Undergraduate Student Research Award (USRA) – $4,500
2020 UBC CS Rick Sample Memorial Research Award – $2,500
2019 IVADO/Mila Deep Learning Winter School Scholarship – $500
2019 Kenneth G. Young Memorial Scholarship – $800
2017 Sauder School of Business Scholarship (top 3/800 in the faculty) – $2,300
2017 UBC Trek Excellence Scholarship (top 5%) – $1,500

Publications

O. AlOmeir, **E. Y. Lai**, M. Milani, and R. Pottinger. *Summarizing Provenance of Aggregation Query Results in Relational Databases.* [Short paper]. To Appear in IEEE International Conference on Data Engineering, 2021 (ICDE '21).

O. AlOmeir, **E. Y. Lai**, M. Milani, and R. Pottinger. *Pastwatch: On the Usability of Provenance Data in Relational Databases.* [Short paper]. To Appear in IEEE International Conference on Data Engineering, 2020 (ICDE '20).

On-Going Work

QueryTeller: Sequence-Aware Query Recommendation Using Deep Learning.

Presentations

Developing a Data-Driven Electric Vehicle Strategy in Surrey, BC, Canada. [Co-presented]. Special Interest Group on Knowledge Discovery and Data Mining, Social Impact Session, 2020 (SIGKDD '20).

Maximizing Utilization of Electric Vehicle Charging Infrastructure in Surrey, BC Using a Data-Driven Model. [Co-presented]. UBC Multidisciplinary Undergraduate Research Conference, 2020.

UBC Computer Science Undergraduate Program Evaluation and Renewal. [Co-presented with Dr. Rachel Pottinger]. UBC Board of Governors Meeting, 2020.

Facilitating Users with SQL Query Formulation. UBC Undergraduate Three-Minute Thesis Competition, 2019.

Research Experience

UBC Data Management and Mining Lab — May 2019-Present
Research Volunteer and Intern (Since May 2020) with Dr. Rachel Pottinger

- Contributed to project ideation, the implementation of the backend system, and the experiments for two short-paper projects as the second author.
- Currently leading a team of four on a project that applies concepts of visualization and machine learning to recommend customized SQL queries using query workloads.

UBC Sauder Information Systems Division — July 2019-August 2020
Research Assistant with Dr. Arslan Aziz, Dr. Gene Lee

- Used causal inference methods to evaluate the impact of online platform policy changes.
- Applied natural language processing (NLP) techniques to process large datasets and use Amazon AWS and Google NLP APIs to identify unnatural reviews based on linguistic features.

UBC Data Science for Social Good Program — Summer 2019
Research Intern with Dr. Raymond Ng, Dr. Kevin Lin

- Partnered with the Environmental Sustainability Advisory Committee of the City of Surrey, BC to guide the development of the Surrey Electric Vehicle Transformation Strategy.
- Used statistical and machine learning models to understand potential electric vehicle consumers and classify communities into groups such as current growth and high potential.
- Enabled data-driven city planning by helping the city select 20 curbside charger locations for a federal funding proposal in September 2019.

Grad Course Projects

CPSC 530L AI Social Impact with Dr. Kevin Leyton-Brown — Spring 2020

- Worked on a team project that uses deep learning techniques to improve irrigation strategies in agriculture as a collaboration with ecohydrologists in UBC Earth and Ocean Sciences.
- Found and defined an interdisciplinary research problem from scratch by looking into real-world issues, narrowing down project scope, exploring feasibility, and soliciting domain experts' view.
- Extracted, explored, and processed 60GB NASA satellite data used in modelling.

COMM 635 Causal Inference in Information Systems with Dr. Arslan Aziz — Spring 2020

- Used difference-in-difference and fixed effects to evaluate the impact of online platform policy changes on incentivized reviews in small electronic products, e.g., batteries and screen protectors.
- Proved and validated with robustness check that after Amazon's ban on incentivized reviews, the number of unnatural reviews maintained while their characteristics became more similar to natural reviews, providing a proof-of-concept for evaluating platform-wide policy effects.

Industry Experience

Statistics Canada Ottawa Headquarter — September 2017-April 2018

Software Developer Intern

- Implemented a web service application embedded in a toolbox using technologies such as C#, JavaScript, SQL, ASP .NET and exceeded clients expectations by optimizing jQuery widgets.
- Designed and developed a Windows Service application and obtained positive feedback from clients by effectively communicating the client needs and executing tasks efficiently.
- Obtained a full-time offer from the Statistics Information System Division (SISD) executive team by demonstrating strong self-learning skills and work ethic.

Other Experience

UBC CS Undergraduate Program Renewal Project, *Admin Assistant*	August 2019-August 2020
UBC CPSC 304 Introduction to Relational Databases, *Teaching Assistant*	Summer 2019

Community Involvement

SIGMOD 2020, *Student Volunteer*	June 2020
UBC Data Science for Social Good Program, *Student Mentor*	June 2020
UBC CS Student Society (CSSS) Coffee Chat, *Mentor*	March 2020-May 2020
UBC CS Tri-Mentoring Program, *Student Mentor*	September 2018-April 2019
Greater Vancouver Regional Science Fair, *Lab Volunteer*	April 2017
Vancouver Learning Buddy Network, *Math Tutor Volunteer*	January 2017-April 2017
UBC YOURS Club, *IT Team Executive*	October 2015-April 2016

Programming

Python, R, JavaScript.

References

Available upon request.