

# LAUREN FRATAMICO

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Data Scientist • QI-Leap Inc.

1410-409 Granville St. Vancouver, BC V6C 1A3

## EDUCATION

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**University of British Columbia**  
Master of Science, Computer Science

February 2016

**University of California, Berkeley**  
Bachelor of Arts, Computer Science

May 2013

## INDUSTRY EXPERIENCE

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**QI-Leap Analytics**  
*Data Scientist*

July 2016 - Present  
Vancouver, BC

Currently employed as a data scientist, and working mainly as a consultant. Some examples of the projects I have worked on include (1) building NLP models to predict interaction with future published social media posts, (2) building demand prediction models to forecast future sales, and (3) mining data from NFL teams facebook pages and from ESPN blog posts to crowdsource opinions on which sports team is going to win.

**SAP**  
*Cloud Analytics Developer*

February 2016 - June 2016  
Vancouver, BC

Worked on SAPs BusinessObjects Insights tool (a tool to help users visualize and gain insights from their data). Specifically, I built tools to allow users to filter their data in a variety of ways.

**Google**  
*Software Development Intern*

May 2013 - August 2013  
San Bruno, CA

Developed a tool as a member of the YouTube Education team to expand the education channel and improve content.

**Intel**  
*Software Engineering Intern*

May 2012 - August 2012  
Santa Clara, CA

Intel Media Department - produced Java tools that interfaced with Amazon Cloud products: DynamoDB, S3, EMR.

## ACADEMIC EXPERIENCE

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*\*indicates a paid position*

**UBC Centre for Teaching, Learning and Technology**  
*Graduate Researcher*

August 2016 - Present  
Vancouver, BC

Created a visualization to allow users to understand ways to engineer features in their temporal dataset so that the resulting features are both (1) informative in their abstracted level and (2) able to differentiate labeled groups. This analytic method was applied to understand how different types of learners interact with an online, exploratory learning environment. A paper on this visual analytic approach was submitted to the 2017 Learning @ Scale conference.

**UBC Computer Science Department**  
*Graduate Researcher\**

August 2013 - February 2016  
Vancouver, BC

Applied machine learning algorithms to cluster and classify low and high level learners and distinguish the actions they make while working through a physics circuit simulation. Developed a student model, and aimed to come up with suggestions for adaptive interventions. Presented paper on topic at the 2015 AIED conference. A journal paper on topic conditionally accepted in IJAIED.

**UBC Sauder School of Business**  
*Graduate Researcher\**

June 2015 - Present  
Vancouver, BC

Developing an efficient tool to parse heterogeneous US patent documents (1TB textual data, 1976 - present) to mine those containing key patterns of interest and extract features to correlate with stock market fluctuations.

**UBC Computer Science Department**  
*Teaching Assistant - Human Computer Interaction (CPSC 344/544)\**

August 2013 - May 2014  
Vancouver, BC

Upper division/graduate level HCI course. Led weekly workshops and contributed to course redesign.

**UC Berkeley School of Information**  
*Undergraduate Researcher*

September 2012 - December 2013  
*Berkeley, CA*

Analyzed and visualized large datasets of phone calls in a developing South Asian country to determine the homophily of different groups in the population. Developed a novel way to measure segregation within a population. Paper on this topic accepted to the 2013 ACM DEV Conference.

**UC Berkeley Political Science Department**  
*Undergraduate Researcher\**

June 2012 - August 2013  
*Berkeley, CA*

Developed tools to extract data from policies from the Office of Information and Regulatory Affairs (OIRA) and explored using topic models to help describe which policies OIRA chose to take action on.

**UC Berkeley AMP (Algorithms, Machines, People) Lab**  
*Undergraduate Researcher\**

October 2011 - January 2013  
*Berkeley, CA*

Built an interactive visualization that allowed users to visually understand how the parameters they chose impacted the accuracy and speed of SNAP, a nucleotide alignment tool built by the lab.

**Berkeley Institute of Soft Computing**  
*Undergraduate Researcher*

August 2012 - January 2013  
*Berkeley, CA*

Applied machine learning techniques to analyze semantically similar sentences, classifying a set of sentences as referring to the same image or a different one based on the nouns, verbs, and adjectives used in the sentences.

## PUBLICATIONS

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### Journal Articles

- **Fratamico, L.**, Conati, C., Roll, I., & Kardan, S. (Under Review). *Applying a framework for student modeling in interactive simulations: comparing data representation granularity to handle environment complexity*. International Journal of Artificial Intelligence in Education.

### Conference Proceedings

- **Fratamico, L.**, Perez, S., & Roll, I. (Under Review). *A visual approach towards understanding how students learn in complex environments*. Proceedings of the 4th ACM conference on Learning @ Scale. ACM.
- Conati, C., **Fratamico, L.**, Kardan, S., & Roll, I. (2015, June). *Comparing representations for learner models in interactive simulations*. International Conference on Artificial Intelligence in Education (pp. 74-83). Springer International Publishing.
- Blumenstock, J., & **Fratamico, L.** (2013, December). *Social and spatial ethnic segregation: a framework for analyzing segregation with large-scale spatial network data*. Proceedings of the 4th Annual Symposium on Computing for Development (p. 11-20). ACM.

## CONFERENCE PRESENTATIONS

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### **Artificial Intelligence in Education**

*Comparing representations for learner models in interactive simulations*

June 2015  
*Madrid, Spain*

## EXTRACURRICULAR ACTIVITIES

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### **GIRLsmarts4tech**

*Workshop Volunteer and Coordinator*

November 2013 - February 2014; January 2016 - February 2016  
*Vancouver, BC*

Led middle school girls through a series of computer science activities to enthuse them about programming and computer science.

### **Let's Talk Science**

*Science Fair Mentor*

October 2015 - February 2015  
*Vancouver, BC*

Guided seven 9th graders through the completion of a science fair project. Taught them the scientific method, experimentation, and data analysis. Four progressed to the regional fair!

## TECHNICAL STRENGTHS

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### **Computer Languages**

Python (6 years), Javascript (2 years), Java (2 years)

### **Statistical Software**

Weka, NumPy, SciPy, R, SPSS, MATLAB

### **Databases**

Some experience with relational databases and SQL