

LAUREN FRATAMICO

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Graduate Research Assistant • MIT Media Lab

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EDUCATION

Massachusetts Institute of Technology
MIT Media Lab

September 2017 - Present

University of British Columbia
Master of Science, Computer Science

August 2013 - February 2016

University of California, Berkeley
Bachelor of Arts, Computer Science

August 2009 - May 2013

INDUSTRY EXPERIENCE

QI-Leap Analytics (a retail analytics startup)
Lead Data Scientist

July 2016 - June 2017
Vancouver, BC

Q.I. Leap's focus is on retail analytics for brick and mortar companies. We also operated as consultants. Some examples of the projects I 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

**indicates a paid position*

MIT Media Lab
*Graduate Researcher**

September 2017 - Present
Cambridge, MA

Analyzing Reddit conversations about loneliness to understand the characteristics that facilitate healthy online interactions, towards building an AI system that can help optimally connect people to talk to.

UBC Centre for Teaching, Learning and Technology
Graduate Researcher

August 2016 - April 2017
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 accepted 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 the topic has been accepted in IJAIED.

UBC Sauder School of Business
*Graduate Researcher**

June 2015 - August 2017
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

August 2013 - May 2014

*Teaching Assistant - Human Computer Interaction (CPSC 344/544)**

Vancouver, BC

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

UC Berkeley School of Information

September 2012 - December 2013

Undergraduate Researcher

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

June 2012 - August 2013

*Undergraduate Researcher**

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

October 2011 - January 2013

*Undergraduate Researcher**

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

August 2012 - January 2013

Undergraduate Researcher

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

**indicates co-first authorship*

Journal Articles

- **Fratamico, L.**, Conati, C., Roll, I., & Kardan, S. (January 2017). *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. (April 2017). *A visual approach towards knowledge engineering and 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*. (June 2015). *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.** (December 2013). *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.

Workshops

- Shen, J.*, **Fratamico, L.***, Rahwan, I., Rush, A. (July 2018). *Darling or Babygirl? Investigating Stylistic Bias in Sentiment Analysis*. Fairness, Accountability, and Transparency in Machine Learning Workshop (FAT/ML).

CONFERENCE PRESENTATIONS

Fairness, Accountability, and Transparency in Machine Learning Workshop (FAT/ML)

July 2018

Darling or Babygirl? Investigating Stylistic Bias in Sentiment Analysis

Stockholm, Sweden

Artificial Intelligence in Education

June 2015

Comparing representations for learner models in interactive simulations

Madrid, Spain

EXTRACURRICULAR ACTIVITIES

GIRLsmarts4tech

November 2013 - February 2014; January 2016 - February 2016

Workshop Volunteer and Coordinator

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

October 2015 - February 2015

Science Fair Mentor

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

Computer Languages

Python (8 years), Javascript (3 years), Java (2 years)

Artificial Intelligence

Machine Learning (PyTorch, Weka), Data Collection (APIs, Selenium)

Statistical Software

NumPy, SciPy, R, SPSS, MATLAB

Databases

SQL and some experience with relational databases