

# Eric Brochu

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*I have an academic background in Machine Learning and Artificial Intelligence and extensive industry experience. I have taken on a variety of technical and leadership roles as needed to ship high-profile features and apps.*

## Employment

|                      |   |   |
|----------------------|---|---|
| since dec 2020       | <b>Machine Learning Engineering Architect</b>   | <b>Salesforce (Tableau)</b> Vancouver, BC, Canada |
|                      | <ul style="list-style-type: none"><li>• Led successful effort to build an team to centralize ML Engineering efforts across the Tableau Analytics.</li><li>• As tech lead and architect for the new team, my mandate includes design, prototyping, productizing, and analysis of ML components for feature teams working on Recommendations, Relevance, and Automated Insights.</li><li>• As team lead, I mentor, motivate and oversee ML Engineers on my team and work across engineering and research teams as a software architect and ML expert.</li><li>• Specific ML architectural projects I've initiated include implementing and deploying a personalized Learning-to-Rank model, and adding a Feature Store to our ML production infrastructure.</li></ul> |   |
| apr 2020 - dec 2020  | <b>Principal Machine Learning Engineer</b>  | <b>Tableau</b> Vancouver                          |
| apr 2019 - apr 2020  | <b>Staff Software Engineer, Machine Learning</b>  | <i>Acquired by Salesforce</i>                     |
| mar 2016 - apr 2019  | <b>Senior Software Engineer, Machine Learning</b>   |   |
|                      | <ul style="list-style-type: none"><li>• Primary or lead ML engineer on Data Source &amp; Tables Recommendations (shipped in 2017), View Recommendations (2019), and Data Change Radar (2021).</li><li>• As ML group (Augmented Analytics) grew, I was involved in every step of the process, from feature conception, through prototyping and iteration, to productization and deployment infrastructure, to collecting feedback and marketing.</li><li>• Took on leadership roles. Acted as scrum master, organized an ML Engineering and Data Science "guild", coached and mentored ML engineers.</li><li>• Published academic papers and technical documents and gave numerous talks to Tableau and Salesforce internal and external audiences.</li></ul>        |   |
| 2014 - 2016          | <b>Independent Developer and Consultant</b>   | <b>self-employed</b> Vancouver                    |
|                      | <ul style="list-style-type: none"><li>• Worked on iOS apps as Machine Learning/Computer Vision consultant and general dev.</li></ul>  |   |
| 2011 - 2014          | <b>iOS App Developer, etc</b>   | <b>Pocket Pixels</b> Vancouver                    |
|                      | <ul style="list-style-type: none"><li>• Developer on popular iOS photo editing apps Color Splash and Juxtaposer.</li><li>• As member of a 2-4 person studio, I was also deeply involved in UI/UX design, marketing, project management, customer support, etc.</li><li>• Apps were featured by Apple in the iOS App Store numerous times and made it into Apple's Top 10 Paid Apps lists.</li></ul>   |   |
| 2005 - 2009          | <b>Senior Research Engineer</b>   | <b>Zite</b> Vancouver                             |
| 2001-2006, 2009-2010 | <b>Research Assistant/Teaching Assistant</b>  | <b>University of British Columbia</b> Vancouver   |

## Education

- 2011 **PhD, Computer Science** **University of British Columbia** Vancouver, BC, Canada  
[Nando de Freitas](#), supervisor.  
Thesis: [Interactive Bayesian Optimization](#)
- Selected PhD awards:  
First Place, ACM SIGGRAPH 2007 Student Research Competition  
Walter C Koerner Fellowship  
University of British Columbia Graduate Fellowship (UGF)  
Natural Sciences and Engineering Research Council Doctoral Scholarship (NSERC PGS D)
- The focus of my academic work was AI tools that augment human decision making. My thesis was on a novel system to assist humans in efficiently finding solutions to difficult problems by using Machine Learning (primarily Bayesian Optimization) to formulate minimal sets of questions or queries expected to be maximally informative. This work has more recently proved relevant to Hyperparameter Optimization and Automatic Machine Learning.
- 2004 **MSc, Computer Science** **UBC**  
Nando de Freitas, supervisor  
Thesis: [Music Interpreted as Lexical Qualifiers](#)
- 1998 **BSc, Computer Science** **University of Regina** Regina, SK, Canada  
Graduated with Distinction
- 1997 **BA, English w/ minor in Film Studies** **University of Regina**  
Graduated with Distinction

## Selected Publications

D Ting and **E Brochu**. 2018. *Optimal Subsampling with Influence Functions*. Thirty-Second Annual Conference on Neural Information Processing Systems (NeurIPS 2018).

**E Brochu**, VM Cora and N de Freitas. 2010. *A Tutorial on Bayesian Optimization of Expensive Cost Functions, with Application to Active User Modeling and Hierarchical Reinforcement Learning*. arXiv:1012.2599.

Cited > 2000 times.

**E Brochu**, A Ghosh and N de Freitas. 2007. *Preference Galleries for Material Design*. ACM SIGGRAPH Sketch.  
First Place, ACM SIGGRAPH 2007 Student Research Competition.

Complete list available [here](#).

## Professional and Academic Activities

Co-inventor on Machine Learning patents US10877970, US20070156615, US20080262986, US20210133239.  
Several more have been filed.

Submission reviewer for UIST (2019), NIPS/NeurIPS (2019, 2018, 2015, 2011, 2010, 2008, 2007), UAI (2017), IJCAI (2009), GI (2008), ICML (2007), AAAI (2007), SIGGRAPH (2010, 2009, 2006, 2005, 2004), CVPR (2005, 2004).

Program committee, NIPS 2011 Workshop on Bayesian Optimization, Experimental Design and Bandits.