

# 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 apr 2020 - dec 2020	<b>Machine Learning Engineering Architect</b> <b>Principal Software Engineer (PMTS)</b>	<b>Salesforce (Tableau)</b> Vancouver, BC, Canada
	<ul style="list-style-type: none"><li>• Led effort to build an internal-facing team to centralize ML Engineering efforts across the Tableau Analytics org.</li><li>• Tech lead for the new team, whose mandate includes design, prototyping, productizing, and analysis of ML components for feature teams working on Recommendations, Automated Insights and NLP.</li><li>• ML architect for Tableau's Data Change Radar feature (shipped in limited preview in 21Q4).</li></ul>	
apr 2019 - apr 2020 mar 2016 - apr 2019	<b>Staff Software Engineer, Machine Learning</b> <b>Senior Software Engineer, Machine Learning</b>	<b>Tableau</b> Vancouver <i>Acquired by Salesforce in 2019.</i>
	<ul style="list-style-type: none"><li>• Working with team of engineers and scientists to add Recommendations and Automated Insights features to Tableau's data visualization product.</li><li>• Primary ML engineer on Tableau's first group of Recommendations features for Tableau Data Sources and Tables content, which shipped in 2017; and View Recommendations (2019).</li><li>• As ML group (Augmented Analytics) has grown, I've been deeply 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. Releases I worked on have been featured by Apple in the iOS App Store numerous times and have made it into Apple's top10 Paid Apps.</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
2001	<b>Software Engineer</b>	<b>SOMA Networks</b> Toronto, ON, Canada
1999 - 2001	<b>Compiler Optimization Developer</b>	<b>IBM Canada</b> Toronto

## 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
- 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**, T Brochu and N de Freitas. 2010. *A Bayesian Interactive Optimization Approach to Procedural Animation Design*. ACM SIGGRAPH/Eurographics 2010 Symposium on Computer Animation.

**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 > 1500 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

US Patent 10877970. *Identifying relevant data sources for a data visualization application*. Co-inventor with M Siegel.

US Patents 20070156615 & 20080262986. *Method for training a classifier*. Co-inventor with A Davar and M Klaas.

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.