

Christopher V. Aicher

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Present Address

3822 23rd Ave W

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Education	PhD in Statistics, University of Washington.	<i>Expected Dec 2019</i>
	M.S. in Applied Mathematics, University of Colorado at Boulder.	May 2014
	B.S. in Applied Mathematics, University of Colorado at Boulder.	May 2014
	Minor in Computer Science	

Experience	Graduate Research Assistant , University of Washington,	Jan 2015 - Current
	<ul style="list-style-type: none">Working with Professor Emily Fox to develop scalable approximate inference procedures (e.g. stochastic gradient methods) for sequential data models, such as state space models and recurrent neural networks.	

	Research Intern , Microsoft AI and Research,	Jun 2017 - Sept 2017
	<ul style="list-style-type: none">Worked with Consumer Data & Analytics team on short-form text clustering.Developed an on-line feature extractor using RNNs and non-parametric clustering.Presented work at internal "Machine Learning, AI, Data Science 2017" conference.	

	Research Scientist Intern , Amazon,	Jun 2016 - Sept 2016
	<ul style="list-style-type: none">Worked with the Kindle devices demand planning team on forecasting sales.Developed a custom R package for prototyping new models.Tested and integrated quantile random forests to improve short-term forecasting	

	Machine Learning Intern , Dato (now Turi),	Jun 2015 - Sept 2015
	<ul style="list-style-type: none">Researched, developed, and shipped a new itemset mining toolkit as part of GraphLab Create's machine learning applications library.	

	Undergraduate Research Assistant , University of Colorado,	Jan 2012 - May 2014
	<ul style="list-style-type: none">Collaborated with Professor Aaron Clauset on statistical learning in networks.Developed a novel weighted version of the stochastic block model and variational inference algorithm for unsupervised community detection.	

Selected Publications	C. Aicher , N.J. Foti and E.B. Fox, "Adaptively Truncating Backpropagation Through Time to Control Gradient Bias". <i>Uncertainty in Artificial Intelligence</i> (2019). (arxiv:1905.07473)
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C. Aicher, S. Putcha, C. Nemeth, P. Fearnhead and E.B. Fox, "Stochastic Gradient MCMC for State Space Models". *Statistics and Computing*, *Under Review*. (arxiv:1901.10568)

C. Aicher, Y.A. Ma, N.J. Foti and E.B. Fox, "Stochastic Gradient MCMC for State Space Models". *SIAM Journal on Mathematics of Data Science*, *To Appear*. (arxiv:1810.09098)

C. Aicher and E.B. Fox, "Approximate Collapsed Gibbs Clustering with Expectation Propagation." *KDD Workshop: Mining and Learning from Time Series* (2016). (arxiv:1807.07621)

C. Aicher, A.Z. Jacobs and A. Clauset, "Learning Latent Block Structure in Weighted Networks." *Journal of Complex Networks*, 3(2) 221-248 (2015). (arxiv:1404.0431)

Full publication list and code available at (<https://aicherc.github.io>).

Skills

Programming Languages:

- Python, R, MATLAB, C++, SQL, L^AT_EX,

Statistics & Computer Science Expertise:

- Stochastic Processes, Time Series, Bayesian Inference, Optimization
- Machine Learning, Algorithms, Data Structures, Database Systems, UNIX