

Akash Srivastava

General Information

Affiliation *Institute of Language, Cognition and Computation, School of Informatics, University of Edinburgh*
Supervisor Dr Charles Sutton and Dr Michael U. Gutmann
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Education

2014–2018 **PhD, ILCC, Informatics Forum**, University of Edinburgh, *UK*.
Variational Inference in Deep Generative Models.
Under Dr Charles Sutton and Dr Michael U. Gutmann
2013–2014 **MSc Informatics, School of Informatics**, University of Edinburgh, *Distinction*.
Machine Learning, Data Science and Natural Language Processing.
Thesis under Dr Victor Lavrenko
2009–2013 **BSc Artificial Intelligence and Computer Science, DCS**, University of Sheffield,
First Class Honours.
Thesis under Prof. Fabio Ciravegna and Dr Trevor Cohn

Experience

Industry

2011–2012 **Intern, Microsoft Technology Center**, Reading, UK.
◦ Whitecoat Award.

Research

2013 **Summer Research Intern, OAK Group**, University of Sheffield.
Developed a novel method for real-time detection of events with low statistical support in Twitter stream to be used for crowd control in music festival. Under Fabio Ciravegna.
July–September **Research Intern, Microsoft Research, Cambridge**, Variational inference in web scale unsupervised learning problems in text.
(2017) Under John Winn.
Feb–March **Visiting Researcher, RIKEN Center for Advanced Intelligence Project, Tokyo, Japan**, Amortized Variational Inference.
(2018) Hosted by Emtiyaz Khan.

Teaching

2015–2016 **Tutor, Research Methods**, Informatics Forum.
Tutored MSc students in the Machine Learning Degree.

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🌐 <http://akashgit.github.io/>

Scholarships and Awards

PhD Xerox Rank Scholarship
PhD School of Informatics Scholarship
PhD ICLR Travel Award, 2017
PhD NIPS Travel Award, 2017
MSc Informatics Global Scholarship
Bsc Sheffield Global Scholarship

Publications

- Akash Srivastava, Lazar Valkov, Chris Russell, Michael U. Gutmann and Charles Sutton. VEEGAN: Reducing Mode Collapse in GANs using Implicit Variational Learning. NIPS, 2017.
- Akash Srivastava and Charles Sutton. Autoencoding Variational Inference for Topic Models. ICLR, 2017.
- Akash Srivastava, James Zou, Ryan P. Adams, and Charles Sutton. Clustering with a Reject Option: Interactive Clustering as Bayesian Prior Elicitation. IDEA Workshop, KDD, 2016 (**Oral**).

Thesis and Technical Reports

- Akash Srivastava. Event Detection in Twitter for Music Festivals. Internal Technical Report, 2013.
- Akash Srivastava. Burst Detection Modulated Document Clustering: A Partially Feature-Pivoted Approach To First Story Detection. Masters Thesis, 2014 under Dr Victor Lavrenko.
- Akash Srivastava. Question Detection in Twitter. BSc Thesis, 2013 under Prof. Fabio Ciravegna.

Preprints and Active Projects

- Akash Srivastava and Charles Sutton. Deep Pachinko Allocation Machine. (Under review, draft available).
- Lazar Valkov, Dipak Chaudhari, Akash Srivastava, Swarat Chaudhuri and Charles Sutton. Synthesis of Differentiable Functional Programs for Lifelong Learning. (Under review, draft available).
- Mohammad Emtiyaz Khan, Zuozhu Liu, Voot Tangkaratt, Didrik Nielsen, Yarin Gal, Akash Srivastava. Vadam: Fast and Scalable Variational Inference by Perturbing Adam. (Under review, draft available).
- Cole Hurwitz, Akash Srivastava, Kai Xu and Matthias Henning. Autoencoding Waveforms to Spike Trains. (Under review).
- Akash Srivastava, Kai Xu, Michael U. Gutmann and Charles Sutton. Generative Modeling using Compressed Sensing for Density Ratio Estimation.
- Kai Xu, Akash Srivastava and Charles Sutton. Autoencoding Indian Buffet Process.

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