

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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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. Robust Generative Modeling via Ratio Matching Networks.
- Kai Xu, Akash Srivastava and Charles Sutton. Autoencoding Indian Buffet Process.

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