# Akash Srivastava

## General Information

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| Affiliation | *Institute of Language, Cognition and Computation, School of Informatics, University of Edinburgh* |
| Supervisor | Dr Charles Sutton and Dr Michael U. Gutmann |
| Address | Informatics Forum 3.39 10 Crichton Street Edinburgh, EH8 9AB |
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## Education

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| 2014–2017 | **PhD**, *ILCC, Informatics Forum*, University of Edinburgh, *UK*. Variational Inference in Deep Generative Models and Interactive Machine Learning. 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

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| 2011–2012 | **Intern**, *Microsoft Technology Center*, Reading, UK. |
| | ○ Provided technical support for Proof of Concept and Architectural Design sessions. |
| | ○ Achieved the Whitecoat Award. |

### Research

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| 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. |
| July-September (2017) | **Research Intern**, *Microsoft Research, Cambridge*, Variational inference in web scale unsupervised learning problems in text. Under John Winn. |
| Feb-March (2018) | **Visiting Researcher**, *RIKEN Center for Advanced Intelligence Project, Tokyo, Japan*, Amortized Variational Inference. Hosted by Emtiyaz Khan. |

### Teaching

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

## 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.

## Under Review and On-going Projects

- Akash Srivastava and Charles Sutton. Deep Pachinko Allocation Machine. (Under review).

- Lazar Valkov, Dipak Chaudhari, Akash Srivastava, Swarat Chaudhuri and Charles Sutton. Synthesis of Differentiable Functional Programs for Lifelong Learning.(Under review).

- Mohammad Emtiyaz Khan, Zuozhu Liu, Voot Tangkaratt, Yarin Gal, Akash Srivastava. Vadam: Fast and Scalable Variational Inference by Perturbing Adam.(Under review).

- Akash Srivastava and Michael U. Gutmann. StormGAN: Reducing Mode Collapse in GANs using Score Matching.

- Cole Hurwitz, Akash Srivastava, Kai Xu and Matthias Henning. Autoencoding Waveforms to Spike Trains. (Under review).

- Akash Srivastava, Lazar Valkov, Michael U. Gutmann and Charles Sutton. Cycle VAE: Fixing Component Collapsing in VAE.

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