

Kai Xu

PH.D STUDENT · MACHINE LEARNING

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Probabilistic Programming | Bayesian Deep Learning | Dimensionality Reduction

Education

University of Edinburgh

PH.D IN INFORMATICS: MACHINE LEARNING

- Being supervised by Dr. Charles Sutton.
- Currently working on amortized inference for Bayesian non-parametric models.

Edinburgh, UK

Sep. 2017 - PRESENT

University of Cambridge

M.PHIL IN MACHINE LEARNING, SPEECH AND LANGUAGE TECHNOLOGY

- Final average grade 72.4%.
- Thesis supervised by Prof. Zoubin Ghahramani and awarded distinction.

Cambridge, UK

Oct. 2015 - Sep. 2016

University of Liverpool

B.ENG IN COMPUTER SCIENCE AND ELECTRONIC ENGINEERING

- Final average grade 84.3%.

Liverpool, UK

Sep. 2013 - Jun. 2015

Xi'an Jiaotong-Liverpool University

B.ENG IN COMPUTER SCIENCE AND TECHNOLOGY

- Final average grade 84.3%.

Suzhou, China

Sep. 2011 - Jun. 2013

Papers

Akash Srivastava, **Kai Xu**, Michael U. Gutmann and Charles Sutton. "Ratio Matching MMD Nets: Low dimensional projections for effective deep generative models." *arXiv preprint arXiv: 1806.00101*, 2018.

Kai Xu, Dae Hoon Park, Yi Chang and Charles Sutton. "Interpreting Deep Classifiers by Visual Distillation of Dark Knowledge." *arXiv preprint arXiv: 1803.04042*, 2018.

Hong Ge, **Kai Xu**, and Zoubin Ghahramani. "Turing: Composable inference for probabilistic programming." *Artificial Intelligence and Statistics*, 2018.

Kai Xu. "Probabilistic programming in Julia." *M.Phil thesis*, August 2016.

Experience

Apple

MACHINE LEARNING INTERN

Cambridge, United Kingdom

May. 2018 - Aug. 2018

Cambridge Machine Learning Group

RESEARCH ASSISTANT

- Developed a new general probabilistic programming language named Turing.jl.
- Researched on composition of MCMC algorithms and efficient HMC variants.

Cambridge, United Kingdom

Nov. 2016 - Jul. 2017

The Brain Charity

IT MAINTAINER AND SOFTWARE DEVELOPER

- Regular maintenance of in-house computing server.
- Developed a new online room booking system.

Liverpool, United Kingdom

Aug. 2014 - Jul. 2015

Skills

Programming

Julia, Python, Java, Scala, MATLAB, Clojure, C/C++, HTML, CSS, JavaScript

Tooling

Git, Atom, Vim, Markdown, LaTeX, macOS, Linux, Android, iOS, Nginx, SQLite

Languages

Chinese, Wu Chinese, English

Honors & Awards

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| 2017 | Ph.D Studentship , University of Edinburgh | <i>Edinburgh, UK</i> |
| 2013 | International Undergraduate Student Scholarship , University of Liverpool | <i>Liverpool, UK</i> |
| 2012 | Academic Excellence Award , Xi'an Jiaotong-Liverpool University | <i>Suzhou, China</i> |

Presentation

JuliaCon, 2017

Berkeley, CA, USA

PRESENTER FOR <TURING: A FRESH APPROACH TO PROBABILISTIC PROGRAMMING.>

Jun. 2017

- Introduced a new general probabilistic programming language named Turing.jl.

References

- Dr. Charles Sutton** School of Informatics, University of Edinburgh ✉ email
- Prof. Zoubin Ghahramani** Department of Engineering, University of Cambridge ✉ email