

Kuan-Chieh (Jackson) Wang

PERSONAL INFORMATION

WEBSITE: <https://wangkua1.github.io>
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RESEARCH INTERESTS

I'm interested in out-of-distribution detection, (deep) generative modelling, Bayesian modelling, and few-shot learning. In terms of application areas, I have worked on computer vision, speech recognition, and sports analytics.

EDUCATION

- SEPT. 2016 - PRESENT PH.D. (candidate), Dept. of Computer Science, **University of Toronto**, Toronto, Canada
Advisor: [Richard Zemel](#)
Thesis: Out-of-distribution Detection in Few-shot Learning (tentative)
- SEPT. 2014 - JUN. 2016 M.Sc., Dept. of Computer Science, **University of Toronto**, Toronto, Canada
Advisor: [Richard Zemel](#)
Thesis: Classifying NBA Offensive Plays Using Neural Networks
- SEPT. 2009 - JUN. 2014 B.A.Sc., Div. of Engineering Science, **University of Toronto**, Toronto, Canada
Thesis: Automated Tuning of Neural Networks: Analysis of Hyperparameters Proposed by the Bayesian Optimization Framework

PUBLICATIONS

* below indicates equal contribution

1. Jens Behrmann*, Paul Vicol*, Kuan-Chieh Wang*, Roger B. Grosse, and Jörn-Henrik Jacobsen (2020)
Understanding and mitigating exploding inverses in invertible neural networks
(preprint)
2. Kuan-Chieh Wang, Paul Vicol, Eleni Triantafillou, and Richard Zemel (2020)
“Few-shot Out-of-Distribution Detection”
In: *ICML Workshop on Uncertainty and Robustness in Deep Learning*
Spotlight
3. Will Grathwohl, Kuan-Chieh Wang, Jörn-Henrik Jacobsen, David Duvenaud, and Richard Zemel (2020)
“Cutting out the Middle-Man: Training and Evaluating Energy-Based Models without Sampling”
In: *ICML*
4. Will Grathwohl, Kuan-Chieh Wang*, Jörn-Henrik Jacobsen*, David Duvenaud, Mohammad Norouzi, and Kevin Swersky (2020)
“Your classifier is secretly an energy based model and you should treat it like one”
In: *ICLR*
Oral
5. Kuan-Chieh Wang, Jixuan Wang, Khai Truong, and Richard Zemel (2019)
“Customizable Facial Gesture Recognition For Improved Assistive Technology”
In: *ICLR AI for Social Good Workshop*
6. Kuan-Chieh Wang*, Chia-Cheng Liu*, Paul Vicol, and Richard Zemel (2019)
“Towards Few-Shot Out-of-Distribution Detection”
In: *ICLR Safe Machine Learning Workshop*
7. Jonathan Shen, Patrick Nguyen, Yonghui Wu, Zhifeng Chen, Mia X Chen, Ye Jia, Anjali Kannan, Tara Sainath, Yuan Cao, Chung-Cheng Chiu, et al. (2019)
“Lingvo: a modular and scalable framework for sequence-to-sequence modeling”
In: *Technical Report*
8. Jixuan Wang*, Kuan-Chieh Wang*, Marc T Law, Frank Rudzicz, and Michael Brudno (2019)
“Centroid-based deep metric learning for speaker recognition”

- In: *ICASSP*. IEEE, pp. 3652–3656
9. Kuan-Chieh Wang, Paul Vicol, James Lucas, Li Gu, Roger Grosse, and Richard Zemel (2018)
“Adversarial distillation of Bayesian neural network posteriors”
In: *ICML*
 10. Thomas Kipf*, Ethan Fetaya*, Kuan-Chieh Wang, Max Welling, and Richard Zemel (2018)
“Neural Relational Inference for Interacting Systems”
In: *ICML*
 11. Yujia Li, Alexander Schwing, Kuan-Chieh Wang, and Richard Zemel (2017)
“Dualing GANs”
In: *NeurIPS*, pp. 5606–5616
 12. Kuan-Chieh Wang and Richard Zemel (2016)
“Classifying NBA offensive plays using neural networks”
In: *MIT Sloan Sports Analytics Conference*

WORK EXPERIENCE

- | | |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DEC. 2018 | Research Intern , Google |
| JUN. 2018 | Worked within Google Brain team with focus on speech recognition hosted by Chung-Cheng Chiu. |
| JUL. 2016 | Machine Learning Consultant , SmartFinance LLC |
| JAN. 2015 | Researched data-driven techniques for merchant resolution (MR).
Developed tools for MR components such as NLP-based merchant name cleanup, logo retrieval, and location resolution. |
| AUG. 2013 | Software Development Intern , Broadcom Corporation |
| MAY. 2012 | Developed on the NFC stack and various downstream application components and was involved in designing new protocol/specs.
Worked with software verification team to develop unit testing scripts using PERL/C++. |

AWARDS AND HONORS

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|-----------|-------------------------------------------------------------------------------------------|
| 2017-2018 | Bell Graduate Scholarship from <i>University of Toronto</i> |
| 2014-2015 | Mitacs Accelerate Grant with <i>University of Toronto & Toronto Raptors</i> |
| 2011 | Honorable Mention - Basic Science at <i>International Paediatric Radiology Conference</i> |
| 2011 | Dream of a Cure Studentship from <i>Canadian Hemophilia Society</i> |
| 2009-2011 | Queen Elizabeth II Aiming for the Top Scholarship |

TEACHING EXPERIENCE

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|-----------|-------------------------------------------------------------------------------------------------------------------|
| SEP. 2014 | University of Toronto , Toronto, Canada |
| PRESENT | <i>Teaching Assistant</i>
Courses: Programming on the Web, Computational Neuroscience, Eng. Sci. Thesis Mentor |

SERVICES

Conference Reviewer: NeurIPS (2019), ICML (2019,2020), ICLR (2019,2020)