

Jake C. Snell

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EDUCATION

Ph.D., Computer Science, **University of Toronto** Toronto, Canada
Advisor: Richard Zemel 2014-2021
Thesis: *Learning to Build Probabilistic Models with Limited Data*

M.Sc., Computer Science, **University of Toronto** Toronto, Canada
Advisor: Richard Zemel 2012-2014
Thesis: *Structured Output Learning with Multiple Ground Truths*

B.Sc. *cum laude*, Biomedical Engineering, **Yale University** New Haven, CT
Thesis: *Optimization of PET Image Reconstruction via Kernel Decomposition* 2006-2010

PROFESSIONAL EXPERIENCE

SK Telecom Seoul, South Korea
Machine Learning Research Intern, T-Brain Group Fall 2018
Developed Gaussian process approaches for few-shot classification.

Twitter Cambridge, MA
Machine Learning Research Intern, Advanced Technologies Group Summer 2016
Worked with Kevin Swersky on metric learning methods for few-shot learning.

SmartFinance LLC New York, NY (remote)
Machine Learning Consultant 2013-2016
Built statistical models to automatically categorize user transactions. Designed algorithms to match noisy transaction strings with merchants.

ZS Associates Princeton, NJ
Business Analytics Associate 2010-2012
Developed multinational market demand estimation study for a novel respiratory treatment. Designed nationwide sales force incentive compensation plan for an innovative autoimmune disorder therapy.

Mayo Clinic Rochester, MN
Summer Undergraduate Research Fellow Summer 2009
Designed image acquisition techniques for improving magnetic resonance angiography in the diagnosis of peripheral arterial disease.

HONORS AND AWARDS

- NeurIPS Best Reviewer Award 2019
- ICIP Best Student Paper Award Finalist 2017
- International Computer Vision Summer School (ICVSS) Best Presentation Award 2014

REFEREED PUBLICATIONS

- [1] **Jake Snell** and Richard Zemel. Bayesian Few-Shot Classification with One-vs-Each Pólya-Gamma Augmented Gaussian Processes. In: *International Conference on Learning Representations*. 2021.

- [2] Marc T. Law, Renjie Liao, **Jake Snell**, and Richard S. Zemel. Lorentzian Distance Learning for Hyperbolic Representations. In: *International Conference on Machine Learning*. 2019.
- [3] Marc T. Law, **Jake Snell**, Amir-massoud Farahmand, Raquel Urtasun, and Richard S. Zemel. Dimensionality Reduction for Representing the Knowledge of Probabilistic Models. In: *International Conference on Learning Representations*. 2019.
- [4] Jack Klys, **Jake Snell**, and Richard Zemel. Learning Latent Subspaces in Variational Autoencoders. In: *Advances in Neural Information Processing Systems*. 2018.
- [5] Mengye Ren, Sachin Ravi, Eleni Triantafillou, **Jake Snell**, Kevin Swersky, Joshua B. Tenenbaum, Hugo Larochelle, and Richard S. Zemel. Meta-Learning for Semi-Supervised Few-Shot Classification. In: *International Conference on Learning Representations*. 2018.
- [6] **Jake Snell**, Karl Ridgeway, Renjie Liao, Brett D. Roads, Michael C. Mozer, and Richard S. Zemel. Learning to Generate Images with Perceptual Similarity Metrics. In: *International Conference on Image Processing*. 2017.
- [7] **Jake Snell**, Kevin Swersky, and Richard Zemel. Prototypical Networks for Few-shot Learning. In: *Advances in Neural Information Processing Systems*. 2017.
- [8] **Jake Snell** and Richard S Zemel. Stochastic Segmentation Trees for Multiple Ground Truths. In: *Uncertainty in Artificial Intelligence*. 2017.

TEACHING

As a teaching assistant at University of Toronto:

- APS360, *Artificial Intelligence Fundamentals* Summer 2019
- CSC411/2515, *Machine Learning and Data Mining* Spring 2018
- CSC420, *Introduction to Image Understanding* Fall 2017
- CSC412/2506, *Probabilistic Learning and Reasoning* Spring 2017
- CSC411/2515, *Machine Learning and Data Mining* Fall 2015
- CSC148, *Introduction to Computer Science* Spring 2014
- CSC411/2515, *Machine Learning and Data Mining* Fall 2013
- CSC148, *Introduction to Computer Science* Spring 2013
- CSC180, *Introduction to Computer Programming* Fall 2012

TALKS

- SK Telecom ai.x Conference, Seoul, South Korea June 2019
- TU Berlin, Machine Learning Group July 2018
- Max Planck Institute for Intelligent Systems, Tübingen, Germany June 2018
- Samsung Advanced Institute of Technology (SAIT), Suwon, South Korea March 2018

REVIEWING

- Neural Information Processing Systems (NeurIPS) 2017, 2018, 2019
- NeurIPS Workshop on Meta-Learning 2017, 2018, 2020
- International Conference on Machine Learning (ICML) 2018, 2019
- International Conference on Learning Representations (ICLR) 2017, 2018, 2020
- Computer Vision and Pattern Recognition (CVPR) 2021