

Dr. Yani A. Ioannou

PERSONAL INFORMATION	Toronto, Ontario Canada	Website: https://yani.ai E-mail: yani.ioannou@gmail.com	LinkedIn: https://linkedin.com/in/yanii GitHub: https://github.com/yanii
SKILLS SUMMARY	<ul style="list-style-type: none">• Ph.D. in Computer Vision, University of Cambridge (2018), Microsoft Research PhD Scholarship.• Published at top conferences in Machine Learning/Computer Vision: NeurIPS, CVPR, ICLR, 3DV.• Research Experience at Leading Industrial Research Labs: Google Brain, Microsoft Research.• Open source software development experience, notably contributions to the Linux Kernel.		
PROFESSIONAL & RESEARCH EXPERIENCE	<p><i>Please refer to my LinkedIn profile for a complete list of my work experience.</i></p> <p>Entrepreneur First, Toronto, Ontario Canada Oct. 7 2020 – Present <i>Founder-in-Residence</i>, First Toronto Cohort</p> <ul style="list-style-type: none">• Entrepreneur First is a pre-seed talent-based startup accelerator backed by the founders of LinkedIn, DeepMind and Paypal, as well as top VCs from Silicon Valley and Europe. <p>Google, Toronto, Ontario Canada Oct. 7 2019 – Oct. 6, 2020 <i>Visiting Researcher (PostDoc)</i>, Brain Toronto/AR Core</p> <ul style="list-style-type: none">• Research with Google Brain towards improving the training of sparse neural networks.• R&D with ARCore improving the efficiency of deep neural networks for AR devices.• Achieved python 'readability', an internal certification for python style/coding competence. <p>University of Toronto, Toronto, Ontario Canada Dec. 2018 – May. 2019 <i>Sessional Lecturer: Introduction to Visual Computing (3rd year)</i>, Department of Computer Science</p> <ul style="list-style-type: none">• Course instructor, responsible for lectures, assignments, and exams.• Student ratings: "Instructor generated enthusiasm": 4.15/5, "Instructor created an atmosphere conducive to my learning": 4.03/5, "Intellectually stimulating": 3.94/5. <p>NASA/SETI Institute, Mountain View, California Jul. 2 – Aug. 19 2018 <i>Invited Researcher</i>, Frontier Development Lab (FDL)</p> <ul style="list-style-type: none">• NASA research accelerator partnering machine learning experts with space scientists.• Increased the efficacy and yield of exoplanets detection over existing methods.• Used by NASA to process data from the Transiting Exoplanet Survey Satellite (TESS). <p>Wayve Technologies, Cambridge, United Kingdom Oct. 2017 – Jul. 2018 <i>Research Scientist</i>, Imitation Learning</p> <ul style="list-style-type: none">• Research into new imitation learning methods for self-driving cars at a seed-level startup.• Technology created was critical to Wayve's series-A funding round success. <p>Microsoft Research, Cambridge, United Kingdom Dec. 2014 – Sept. 2017 <i>Student Researcher (Business Guest)</i> Mar. 2014 – Dec. 2014 <i>Research Intern</i></p> <ul style="list-style-type: none">• Worked with a team of researchers on a 9-month special research project exploring deep learning methods for supervised large scale visual recognition.• Collaboration for duration of Ph.D. on research in deep learning/computer vision. <p>University of Toronto/University Health Network, Toronto, Ontario Canada Mar. 2011 – Nov. 2013 <i>Research Associate</i>, Intelligent Assistive Technology and Systems Lab</p> <ul style="list-style-type: none">• Led R&D of the Personal Emergency Response System (PERS), a computer vision driven fall detection system prototype, hardware/software implementation of prototypes <p>University of Cambridge, Cambridge, United Kingdom Nov. 2015 – Oct. 2018 <i>Ph.D. Information Engineering</i>, Department of Engineering</p> <ul style="list-style-type: none">• Research Topics: computer vision, efficient deep learning, medical, adversarial examples.• Supervisors: Prof. Roberto Cipolla, Dr. Antonio Criminisi, Dr. Matthew Brown.• Microsoft Research Ph.D. Scholarship.		
EDUCATION			

	<p>Queen's University, Kingston, Ontario, Canada <i>Sept. 2006 – Mar. 2010</i> <i>M.Sc. Computing</i>, School of Computing</p> <ul style="list-style-type: none"> • Research Topics: 3D computer vision, pointclouds, LiDAR. • Supervisors: Dr. Michael A. Greenspan, Robin Harrap.
	<p>University of Toronto, Scarborough, Ontario, Canada <i>Sept. 2000 – May. 2006</i> <i>B.Sc. Honours Computer Science Co-op</i>: Software Engineering Specialist.</p> <ul style="list-style-type: none"> • Specialist program is the equivalent of a double major. • Co-op: 1 year of industry experience (see Experience)
SELECTED PUBLICATIONS	<p>Citations: 998, h-index: 9 (Oct. 2020) <i>This is not my full publication list, please refer to my Academic C.V. for the complete list.</i></p>
PRE-PRINT	<p>Gradient Flow in Sparse Neural Networks and How Lottery Tickets Win <i>Utku Evci*</i>, <i>Yani Ioannou*</i>, <i>Cem Keskin</i>, <i>Yann Dauphin</i> arXiv pre-print: 2010.03533 <i>Oct. 7th, 2020</i></p> <hr style="width: 30%; margin-left: 0;"/> <p style="margin-left: 20px;">*These authors contributed equally to this paper.</p>
PEER-REVIEWED	<p>Rapid Classification of TESS Planet Candidates with Convolutional Neural Networks <i>Hugh P. Osborn</i>, <i>Megan Ansdell</i>, <i>Yani Ioannou</i>, <i>Michele Sasdelli</i>, <i>Daniel Angerhausen</i>, <i>Douglas A. Caldwell</i>, <i>Jon M. Jenkins</i>, <i>Chedy Räissi</i>, <i>Jeffrey C. Smith</i> <i>Astronomy & Astrophysics</i>, Volume 633 (A53) <i>Jan. 10th, 2020</i></p> <p>Deep Roots: Improving CNN Efficiency with Hierarchical Filter Groups <i>Yani Ioannou</i>, <i>Duncan Robertson</i>, <i>Roberto Cipolla</i>, <i>Antonio Criminisi</i> 30th IEEE Conference on Computer Vision and Pattern Recognition (CVPR) <i>Honolulu, Hawaii, USA</i> <i>Jul. 21 – 26, 2017</i></p> <p>Measuring Neural Net Robustness with Constraints <i>Osbert Bastani</i>, <i>Yani Ioannou</i>, <i>Leonidas Lampropoulos</i>, <i>Dimitrios Vytiniotis</i>, <i>Aditya Nori</i>, <i>Antonio Criminisi</i> 13th Annual Conference on Neural Information Processing Systems (NeurIPS) <i>Barcelona, Spain</i> <i>Dec. 5 – 10, 2016</i></p> <p>Training CNNs with Low-Rank Filters for Efficient Image Classification <i>Yani Ioannou</i>, <i>Duncan Robertson</i>, <i>Jamie Shotton</i>, <i>Roberto Cipolla</i>, <i>Antonio Criminisi</i> International Conference on Learning Representations (ICLR) 2016 <i>San Juan, Puerto Rico</i> <i>May 2 – 4, 2016</i></p> <p>Difference of Normals as a Multi-Scale Operator in Unorganized Point Clouds <i>Yani Ioannou</i>, <i>Babak Taati</i>, <i>Robin Harrap</i>, <i>Michael Greenspan</i> IEEE International Conference on 3D Imaging, Modelling, Processing, Visualization and Transmission (3DIMPVT) <i>Zurich, Switzerland</i> <i>Oct. 13 – 15, 2012</i></p>
PATENTS	<p>Emergency Detection and Response System and Method <i>Alex Mihailidis</i>, <i>Babak Tatti</i>, <i>Yani Ioannou</i>, <i>Jennifer Boger</i>, <i>James E. Gastle</i> United States Patent Application Publication #US2013/0100268 A1 <i>Apr. 25, 2013</i></p>
VOLUNTEER WORK	<p>Open Source Contributor: I have contributed to many open source projects, including:</p> <ul style="list-style-type: none"> Linux Kernel – Linux is the operating system used by 19 Million PCs, the 79% of smartphones running Android, and 97% of web servers, including those of Google, Facebook and Amazon. <ul style="list-style-type: none"> • Linux 2.6.13, “dynamic sysfs attribute” patch for driver core allowed significant clean-up of most kernel drivers, reducing some by up to 40% in binary module size. • Linux 2.6.17, “IPMI sysfs” patch ported IPMI subsystem to the 2.6 sysfs/driver model Point Cloud Library – Contributed code/tutorials for Difference of Normals. Flax – A Google framework for training neural networks using JAX.