

ONLINE	Website: <a href="https://voletiv.github.io">voletiv.github.io</a>	GitHub: <a href="https://github.com/voletiv">github.com/voletiv</a>	LinkedIn: <a href="#">Vikram Voleti</a>
EDUCATION	<b>PhD student</b> , with Prof. Christopher Pal MILA, UNIVERSITY OF MONTREAL, Canada  <b>Dual Degree (B.Tech. (H) + M.Tech.) in Electrical Engineering</b> with Master's specialization in Instrumentation and Signal Processing INDIAN INSTITUTE OF TECHNOLOGY (IIT), KHARAGPUR, India  <b>CGPA: 8.44 / 10</b>		
RESEARCH PAPERS	[1] <a href="#">Vikram Voleti</a> , David Kanaa, Samira E. Kahou, Chris Pal, "Simple Video Generation using Neural ODEs" in <i>NeurIPS 2019 Workshop (LIRE)</i> [2] Vincent Michalski, <a href="#">Vikram Voleti</a> , Samira E. Kahou, Anthony Oritz, Pascal Vincent, Chris Pal, Doina Precup, "Comparing Normalization in Conditional Computation Tasks" in <i>ICML 2019 Workshop</i> [ <a href="#">pdf</a> ] [3] Abhishek Jha*, <a href="#">Vikram Voleti</a> *, Vinay P. Namboodiri, C. V. Jawahar, "Cross-Language Speech Dependent Lip-Synchronization" in <i>ICASSP 2019</i> [ <a href="#">pdf</a> ] [4] Abhishek Jha*, <a href="#">Vikram Voleti</a> *, Vinay P. Namboodiri, C. V. Jawahar, "Lip-Synchronization for Dubbed Instructional Videos" in <i>CVPR 2018 Workshop (FIVER)</i> [ <a href="#">pdf</a> , <a href="#">url</a> ] [5] <a href="#">V. Voleti</a> , P. Mohan, S. Gupta, J. Iqbal, "Simple Real-Time Pattern Recognition for Industrial Automation," in <i>Proc. International Conference on Industrial Design Engineering</i> , 2017 [ <a href="#">pdf</a> ] [6] S. Jonna, <a href="#">V. S. Voleti</a> , R. R. Sahay, and M. S. Kankanhalli, "A Multimodal Approach for Image De-fencing and Depth Inpainting," in <i>ICAPR</i> , 2015, pp. 1–6 [ <a href="#">pdf</a> , <a href="#">IEEE</a> ]		
RESEARCH EXPERIENCE	<b>Research Intern</b> — GOOGLE, Mountain View, USA <i>Google AI Perception team — Bryan Seybold, Sourish Chaudhuri</i> <ul style="list-style-type: none"> <li>Research on Active Speaker Detection in videos using Switching Non-Linear Dynamical Systems</li> </ul> <b>Research Fellow</b> — IIIT HYDERABAD, India <i>Prof. C. V. Jawahar, Centre for Visual Information Technology, IIIT-Hyderabad</i> <ul style="list-style-type: none"> <li>Full paper published at ICASSP 2019 [<a href="#">3</a>], short paper published at CVPR Workshop 2018 [<a href="#">4</a>]</li> <li>Built a visual speech recognizer (lipreader) to classify spoken words without audio</li> <li>Synthesized video in other languages by generating lips from audio</li> </ul>		
OTHER EXPERIENCE	<b>Teaching Assistant</b> — IVADO/MILA DEEP LEARNING SCHOOL, Montreal, Canada <i>Sep 9-13, 2019</i> <b>Teaching Assistant</b> — UNIVERSITY OF MONTREAL, Montreal, Canada <ul style="list-style-type: none"> <li>Fundamentals of Machine Learning (IFT 6390) — Ioannis Mitliagkas</li> </ul> <b>Scientist in Residence</b> — NEXTAI (startup accelerator), Montreal, Canada <i>Apr 2019 - Aug 2019</i> <ul style="list-style-type: none"> <li>Consultant for multiple startups on computer vision, deep learning and AI</li> </ul> <b>Consultant, Computer Vision</b> — PLAYMENT, Bengaluru, India <i>Jan 2018 - Jun 2018</i> <ul style="list-style-type: none"> <li>Worked on semantic segmentation models for autonomous driving</li> </ul> <b>Mentor, Foundations of AI &amp; ML</b> — TALENTSPRINT, Hyderabad, India <i>Jan 2018 - May 2018</i> <i>Six months certificate program in collaboration with IIIT HYDERABAD, India</i> <ul style="list-style-type: none"> <li>Designed and presented tutorials on machine learning, and mentored industry professionals</li> </ul>		
WORK EXPERIENCE	<b>Image Processing Engineer</b> — GREYORANGE ROBOTICS, Gurgaon, India <i>Feb 2016 - May 2017</i> <ul style="list-style-type: none"> <li>Developed computer vision module to perform video processing in real time for warehouse automation</li> <li>Responsible for development and testing of entire code, including video processing module, module for communication with camera drivers, other systems, and server</li> <li>Research paper [<a href="#">5</a>] based on work is published by ACM at ICIDE 2017</li> </ul>		

	<b>Associate Engineer</b> — AIRBUS GROUP INDIA, Bengaluru, India <span style="float: right;"><i>Jul 2014 - Feb 2016</i></span> <ul style="list-style-type: none"> <li>Involved in development and integration of avionics systems for the long-range aircrafts family</li> <li>Simulated signal-level modifications to the Flight Warning Computer, adopting standard avionics coding guidelines (DO-178B)</li> </ul>
TALKS & OTHER ACHIEVEMENTS	<ul style="list-style-type: none"> <li><i>May 2019</i> — Talk: Tutorial on GANs at the <a href="#">AI for Social Good Summer Lab</a>, Montreal</li> <li><i>Jan 2019</i> — Code: Released code for Self-Attention GAN in PyTorch, converting from TensorFlow code released by Google Brain <a href="#">[GitHub]</a></li> <li><i>Oct 2018</i> — Talk: “BigGAN - Large Scale GAN Training for High Fidelity Natural Image Synthesis” <a href="#">[presentation]</a> — at Mila, University of Montreal, Canada</li> <li><i>Feb 2018</i> — Talk: “Image de-fencing using RGB-D data” <a href="#">[presentation]</a> — at Max Planck Insitute for Informatics, Saarbrücken, Germany</li> <li><i>Feb 2018</i> — Talk: “Intuition behind LSTMs” <a href="#">[presentation]</a> — at IIIT Hyderabad, India</li> <li><i>Aug 2017</i> — Talk: “Mathematics of back-propagation in multi-layer perceptrons” <a href="#">[link]</a> — at GreyOrange Robotics, India, and at IIIT-Hyderabad, India</li> <li>Attended summer schools on <a href="#">Computer Vision</a> and <a href="#">Machine Learning</a> at IIIT-Hyderabad in 2017 <ul style="list-style-type: none"> <li>Stood 3<sup>rd</sup> in Computer Vision Summer School out of 120+ participants, rewarded full fee waiver</li> <li>Stood 4<sup>th</sup> in Machine Learning Summer School out of 120+ participants, rewarded full fee waiver</li> </ul> </li> <li>Won the SMS Classification challenge, participated in the Video Action Recognition challenge in the 2017 <a href="#">Hack2Innovate</a> hackathon in Bangalore, India</li> <li>Qualified JEE 2009 by IIT at 99.7 percentile, with All India Rank of 1330 (out of 384,977)</li> </ul>
THESIS PROJECTS	<b>Masters thesis</b> — “ <b>De-fencing of Images using RGB-D Data</b> ” <span style="float: right;"><i>2013 - 2014</i></span> IIT KHARAGPUR, India — <i>Prof. Rajiv Sahay, Department of Electrical Engineering</i> <ul style="list-style-type: none"> <li>Elimination of fence-like occlusions, and inpainting of images using RGB-D data</li> <li>Nominated for Best M.Tech. Project Award among three departments (Electrical, Electronics, CS)</li> <li>Research paper <a href="#">[6]</a> based on work is published in the proceedings of ICAPR 2015</li> <li>Links — <a href="#">GitHub repository</a> containing <a href="#">thesis</a>, <a href="#">presentation</a>, code files, and results</li> </ul> <b>Bachelors thesis</b> — “ <b>Identification of Bilabial Lip Closures in Audio and Video</b> ” <span style="float: right;"><i>2012 - 2013</i></span> IIT KHARAGPUR, India — <i>Prof. Rajiv Sahay, Department of Electrical Engineering</i> <ul style="list-style-type: none"> <li>Measurement of synchronization between audio and video using bilabial cues in both modes</li> <li>Links — <a href="#">GitHub repository</a> containing <a href="#">thesis</a>, <a href="#">presentation</a>, code files, and results</li> </ul>
PAST RESEARCH INTERNSHIPS	<b>“Implementation of Carry-Free Arithmetic Operations in FPGA”</b> <span style="float: right;"><i>Summer 2013</i></span> KU LEUVEN, Belgium — <i>Prof. Ingrid Verbauwhede, Computer Security &amp; Industrial Applications</i> <ul style="list-style-type: none"> <li>Designed arithmetic operations using Carry-Free Logic, simulated circuits in Xilinx</li> <li>Links — <a href="#">GitHub repository</a> containing <a href="#">report</a>, <a href="#">presentation</a>, and related files</li> </ul> <b>“Fingertip Gesture Recognizer using HMMs”</b> <span style="float: right;"><i>Summer 2012</i></span> IIT KHARAGPUR, India — <i>Prof. Aurobinda Routray, Department of Electrical Engineering</i> <ul style="list-style-type: none"> <li>Implemented Hidden Markov Models in MATLAB, used to recognize shapes drawn by fingertip</li> <li>Links — <a href="#">GitHub repository</a> containing <a href="#">report</a>, <a href="#">presentation</a>, code files, and results</li> </ul> <b>“Measurement of Intra-die Power Variation in Sub-nm FPGA’s”</b> <span style="float: right;"><i>Summer 2011</i></span> IMPERIAL COLLEGE, London, UK — <i>Prof. Peter Cheung, Head, Electrical and Electronics Engineering</i> <ul style="list-style-type: none"> <li>Measured the relative power consumption among the LookUp Tables (LUTs) of an FPGA</li> <li>Links — <a href="#">GitHub repository</a> containing <a href="#">presentation</a>, certificate, and recommendation letter</li> </ul>
SKILLS	C, C++, CUDA, HTML/CSS, Javascript, Keras, MATLAB, OpenCV, Python, PyTorch, Shell, Tensorflow