

ONLINE	Website: voletiv.github.io	GitHub: github.com/voletiv	LinkedIn: Vikram Voleti
EDUCATION	<p>PhD student, with Prof. Christopher Pal <i>Fall 2018 - present</i> MILA, UNIVERSITY OF MONTREAL, Canada</p> <p>Dual Degree (B.Tech. (H) + M.Tech.) in Electrical Engineering <i>2009 - 2014</i> with Master's specialization in Instrumentation and Signal Processing INDIAN INSTITUTE OF TECHNOLOGY (IIT), KHARAGPUR, India CGPA: 8.44 / 10</p>		
RESEARCH PAPERS	<p>[1] Vikram Voleti, David Kanaa, Samira E. Kahou, Chris Pal, "Simple Video Generation using Neural ODEs" - <i>NeurIPS 2019 Workshop</i> (LIRE) [pdf]</p> <p>[2] Vincent Michalski, Vikram Voleti, Samira E. Kahou, Anthony Oritz, Pascal Vincent, Chris Pal, Doina Precup, "Comparing Normalization in Conditional Computation Tasks" - <i>ICML 2019 Workshop</i> [pdf]</p> <p>[3] Abhishek Jha*, Vikram Voleti*, Vinay P. Namboodiri, C. V. Jawahar, "Cross-Language Speech Dependent Lip-Synchronization" - <i>ICASSP 2019</i> [pdf]</p> <p>[4] Abhishek Jha*, Vikram Voleti*, Vinay P. Namboodiri, C. V. Jawahar, "Lip-Synchronization for Dubbed Instructional Videos" - <i>CVPR 2018 Workshop</i> (FIVER) [pdf, url]</p> <p>[5] V. Voleti, P. Mohan, S. Gupta, J. Iqbal, "Simple Real-Time Pattern Recognition for Industrial Automation" - <i>Proc. International Conference on Industrial Design Engineering</i>, 2017 [pdf]</p> <p>[6] S. Jonna, V. S. Voleti, R. R. Sahay, and M. S. Kankanhalli, "A Multimodal Approach for Image De-fencing and Depth Inpainting" - <i>ICAPR 2015</i> [pdf, IEEE]</p>		
RESEARCH EXPERIENCE	<p>Visiting Researcher — Prof. Graham Taylor, UNIVERSITY OF GUELPH, Canada <i>Dec 2019 - present</i></p> <p>Research Intern — GOOGLE, Mountain View, USA <i>Sep 2019 - Dec 2019</i> <i>Google AI Perception team</i> — Bryan Seybold, Sourish Chaudhuri</p> <ul style="list-style-type: none"> • Research on Semi-supervised Active Speaker Detection in videos • Research on using Switching Non-Linear Dynamical Systems to model speaker activity <p>Research Fellow — Prof. C. V. Jawahar, IIIT HYDERABAD, India <i>May 2017 - Aug 2018</i></p> <ul style="list-style-type: none"> • Built a visual speech recognizer (lipreader) to classify spoken words without audio • Synthesized video in other languages by generating lips from audio • Full paper published at ICASSP 2019 [3], short paper published at CVPR Workshop 2018 [4] 		
OTHER EXPERIENCE	<p>Teaching Assistant — IVADO/MILA DEEP LEARNING SCHOOL, Montreal, Canada <i>Sep 9-13, 2019</i></p> <p>Teaching Assistant — UNIVERSITY OF MONTREAL, Montreal, Canada <i>Sep 2019</i></p> <ul style="list-style-type: none"> • Fundamentals of Machine Learning (IFT 6390) — Ioannis Mitliagkas <p>Scientist in Residence — NEXTAI (startup accelerator), Montreal, Canada <i>Apr 2019 - Aug 2019</i></p> <ul style="list-style-type: none"> • Consultant for multiple startups on computer vision, deep learning and AI <p>Consultant, Computer Vision — PLAYMENT, Bengaluru, India <i>Jan 2018 - Jun 2018</i></p> <ul style="list-style-type: none"> • Worked on semantic segmentation models for autonomous driving <p>Mentor, Foundations of AI & ML — TALENTSPRINT, Hyderabad, India <i>Jan 2018 - May 2018</i> <i>Six months certificate program in collaboration with IIIT HYDERABAD, India</i></p> <ul style="list-style-type: none"> • Designed and presented tutorials on machine learning, and mentored industry professionals 		

WORK EXPERIENCE	Image Processing Engineer — GREYORANGE ROBOTICS, Gurgaon, India <i>Feb 2016 - May 2017</i> <ul style="list-style-type: none"> Developed computer vision module for video processing in real time for warehouse automation Research paper [5] based on work is published by ACM at ICIDE 2017
	Associate Engineer — AIRBUS GROUP INDIA, Bengaluru, India <i>Jul 2014 - Feb 2016</i> <ul style="list-style-type: none"> Involved in development and integration of avionics systems for the long-range aircrafts family Simulated signal-level modifications to the Flight Warning Computer, adopting standard avionics coding guidelines (DO-178B)
TALKS & OTHER EFFORTS	<ul style="list-style-type: none"> <i>Jan 2020</i> - Talk: Simple Video Generation using Neural ODEs at IIIT Hyderabad, India [presentation] <i>May 2019</i> - Talk: Tutorial on GANs at the AI for Social Good Summer Lab, Montreal <i>Jan 2019</i> - Code: Released code for Self-Attention GAN in PyTorch, converting from TensorFlow code released by Google Brain [GitHub] <i>Oct 2018</i> - Talk: “BigGAN - Large Scale GAN Training for High Fidelity Natural Image Synthesis” at Mila, University of Montreal, Canada [presentation] <i>Feb 2018</i> - Talk: “Image de-fencing using RGB-D data” at Max Planck Insitute for Informatics, Saarbrücken, Germany [presentation] <i>Feb 2018</i> - Talk: “Intuition behind LSTMs” at IIIT Hyderabad, India [presentation] <i>Aug 2017</i> - Talk: “Mathematics of back-propagation in multi-layer perceptrons” at GreyOrange Robotics, India, and at IIIT-Hyderabad, India [tutorial] Attended summer schools on Computer Vision and Machine Learning at IIIT-Hyderabad in 2017 <ul style="list-style-type: none"> Stood 3rd in Computer Vision Summer School out of 120+ participants, rewarded full fee waiver Stood 4th in Machine Learning Summer School out of 120+ participants, rewarded full fee waiver Won the SMS Classification challenge, participated in the Video Action Recognition challenge in the 2017 Hack2Innovate hackathon in Bangalore, India Qualified JEE 2009 by IIT at 99.7 percentile, with All India Rank of 1330 (out of 384,977)
THESIS PROJECTS	Masters thesis — “ De-fencing of Images using RGB-D Data ” <i>2013 - 2014</i> IIT KHARAGPUR, India — <i>Prof. Rajiv Sahay, Department of Electrical Engineering</i> <ul style="list-style-type: none"> Elimination of fence-like occlusions, and inpainting of images using RGB-D data Nominated for Best M.Tech. Project Award among three departments (Electrical, Electronics, CS) Research paper [6] based on work is published in the proceedings of ICAPR 2015 Links — GitHub repository containing thesis, presentation, code files, and results Bachelors thesis — “ Identification of Bilabial Lip Closures in Audio and Video ” <i>2012 - 2013</i> IIT KHARAGPUR, India — <i>Prof. Rajiv Sahay, Department of Electrical Engineering</i> <ul style="list-style-type: none"> Measurement of synchronization between audio and video using bilabial cues in both modes Links — GitHub repository containing thesis, presentation, code files, and results
PAST RESEARCH INTERNSHIPS	KU LEUVEN, Belgium — <i>Prof. Ingrid Verbauwhede, ESAT</i> <i>Summer 2013</i> <ul style="list-style-type: none"> Designed arithmetic operations using Carry-Free Logic, simulated circuits in Xilinx IIT KHARAGPUR, India — <i>Prof. Aurobinda Routray, Electrical Engineering</i> <i>Summer 2012</i> <ul style="list-style-type: none"> Implemented Hidden Markov Models in MATLAB, used to recognize shapes drawn by fingertip IMPERIAL COLLEGE, London, UK — <i>Prof. Peter Cheung, Electrical & Electronics</i> <i>Summer 2011</i> <ul style="list-style-type: none"> Measured the relative power consumption among the LookUp Tables (LUTs) of an FPGA
SKILLS	C, C++, CUDA, HTML/CSS, Javascript, Keras, MATLAB, OpenCV, Python, PyTorch, Shell, Tensorflow