

Website: voletiv.github.io[Google Scholar](#)[LinkedIn](#)[GitHub](#)

EDUCATION	Mila, University of Montreal , Canada	<i>Fall 2018 - present</i>
	PhD in Computer Science — <i>Supervisor</i> : Prof. Christopher Pal	
	Indian Institute of Technology (IIT), Kharagpur , India	<i>2009 - 2014</i>
	Dual Degree (B.Tech. (H) + M.Tech.) in Electrical Engineering with Master's specialization in Instrumentation and Signal Processing	CGPA: 8.44 / 10
RESEARCH PAPERS	[1] K. M. Jatavallabhula, M. Macklin, F. Golemo, V. Voleti , L. Petrini, M. Weiss, B. Considine, J. Parent-Lévesque, K. Xie, K. Erleben, L. Paull, F. Shkurti, S. Fidler, D. Nowrouzezahrai, “Introducing GradSim: Differentiable Simulation for Self-Supervised Parameter Estimation from Video” - <i>MAIS 2020</i>	
	[2] Sarthak Mittal, Alex Lamb, Anirudh Goyal, Vikram Voleti , Murray Shanahan, Guillaume Lajoie, Michael Mozer, Yoshua Bengio, “Learning to Combine Top-Down and Bottom-Up Signals in Recurrent Neural Networks with Attention over Modules” - <i>ICML 2020</i> [pdf] [arxiv]	
	[3] Vikram Voleti , David Kanaa, Samira E. Kahou, Christopher Pal, “Simple Video Generation using Neural ODEs” - <i>NeurIPS 2019 Workshop</i> [pdf]	
	[4] 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] [arxiv]	
	[5] Vikram Voleti* , Abhishek Jha*, Vinay P. Nambodiri, C. V. Jawahar, “Cross-Language Speech Dependent Lip-Synchronization” - <i>ICASSP 2019</i> [pdf]	
	[6] Vikram Voleti* , Abhishek Jha*, Vinay P. Nambodiri, C. V. Jawahar, “Lip-Synchronization for Dubbed Instructional Videos” - <i>CVPR 2018 Workshop</i> [pdf]	
	[7] V. Voleti , P. Mohan, S. Gupta, J. Iqbal, “Simple Real-Time Pattern Recognition for Industrial Automation” - <i>ICIDE 2017</i> [pdf]	
	[8] 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]	
RESEARCH EXPERIENCE	University of Guelph , Canada — Visiting Researcher	<i>Dec 2019 - present</i>
	• <i>Supervisor</i> : Prof. Graham Taylor	
	Google , Mountain View, USA — Research Intern	<i>Sep 2019 - Dec 2019</i>
	• <i>Team</i> : Google AI Perception, <i>Supervisors</i> : Bryan Seybold, Sourish Chaudhuri	
	• Research on multimodal semi-supervised Active Speaker Detection in videos	
	IIIT Hyderabad , India — Research Fellow; <i>Supervisor</i> : Prof. C. V. Jawahar	<i>May 2017 - Aug 2018</i>
	• Synthesized video in regional Indian languages by generating lips from audio	
	• Full paper published at ICASSP 2019 [5], short paper published at CVPR Workshop 2018 [6]	
OTHER EXPERIENCE	Reviewer — NeurIPS 2020, ICML 2020, CCAI @ ICLR 2020, ICLR 2020, CCAI @ NeurIPS 2019, LLD @ ICLR 2019	
	NextAI , Toronto, Canada — AI Scientist in Residence	<i>Mar 2020 - present</i>
	IVADO/Mila Deep Learning School , Montreal, Canada — Teaching Assistant	<i>Sep 9-13, 2019</i>
	University of Montreal , Montreal, Canada — Teaching Assistant	
	• Fundamentals of Machine Learning (IFT 6390) by Ioannis Mitliagkas	<i>Sep 2019</i>
	NextAI , Montreal, Canada — AI Scientist in Residence	<i>Apr 2019 - Sep 2019</i>
	Playment , Bengaluru, India — Computer Vision Consultant	<i>Jan 2018 - Jun 2018</i>
	• Worked on semantic segmentation models for autonomous driving	
	TalentSprint , Hyderabad, India — Mentor, Foundations of AI & ML	<i>Jan 2018 - May 2018</i>
	• Designed and presented tutorials on machine learning, and mentored industry professionals	

WORK EXPERIENCE	GreyOrange Robotics , Gurgaon, India — Image Processing Engineer <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 [7] based on work is published by ACM at ICIDE 2017
	Airbus , Bengaluru, India — Associate Engineer <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>Jul 2020</i> - “GANs: the story so far” — Summer Symposium on AI Research, India [slides] [video] <i>Jul 2020</i> - “A brief tutorial on Neural ODEs” — Mila, Canada [slides] [video] <i>Apr 2020</i> - “Mathematics of Neural ODEs” — University of Guelph, Canada [slides] <i>Jan 2020</i> - “Simple Video Generation using Neural ODEs” — IIIT Hyderabad, India [slides] <i>May 2019</i> - Tutorial on “GANs” — AI for Social Good Summer Lab, Montreal <i>Jan 2019</i> - Released code for Self-Attention GAN in PyTorch, converting from TensorFlow code released by Google Brain [GitHub] <i>Oct 2018</i> - “BigGAN” — Mila, University of Montreal, Canada [slides] <i>Feb 2018</i> - “Image de-fencing using RGB-D data” — MPI Informatics, Saarbrücken, Germany [slides] <i>Feb 2018</i> - “Intuition behind LSTMs” at IIIT Hyderabad, India [slides] <i>Aug 2017</i> - “Mathematics of back-propagation in multi-layer perceptrons” — GreyOrange Robotics, India, and at IIIT-Hyderabad, India [slides] 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	<p><i>Supervisor</i>: Prof. Rajiv Sahay, Electrical Engineering, IIT KHARAGPUR, India</p> <p>Master’s thesis — “De-fencing of Images using RGB-D Data” <i>2013 - 2014</i></p> <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 [8] based on work is published in the proceedings of ICAPR 2015 <p>Bachelor’s thesis — “Identification of Bilabial Lip Closures in Audio and Video” <i>2012 - 2013</i></p> <ul style="list-style-type: none"> Measurement of synchronization between audio and video using bilabial cues in both modes
PAST RESEARCH INTERSHIPS	<p>KU Leuven, Belgium — <i>Supervisor</i>: Prof. Ingrid Verbauwhede, ESAT <i>Summer 2013</i></p> <ul style="list-style-type: none"> Designed arithmetic operations using Carry-Free Logic, simulated circuits in Xilinx <p>IIT Kharagpur, India — <i>Supervisor</i>: Prof. Aurobinda Routray, Electrical Engineering <i>Summer 2012</i></p> <ul style="list-style-type: none"> Made a gesture recognition program in MATLAB using Hidden Markov Models <p>Imperial College, UK — <i>Supervisor</i>: Prof. Peter Cheung, Electrical & Electronics <i>Summer 2011</i></p> <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, Tensorflow