

Nithin Gopalakrishnan Nair

CONTACT INFORMATION	3501 Saint Paul St Apt. 935 Baltimore, MD, USA	E-mail: ngopala2@jhu.edu Webpage: https://nithin-gk.github.io/ On networks:   
RESEARCH INTERESTS	Deep Learning, Computer Vision, Image Restoration	
RESEARCH STATEMENT	I work on problems in computer vision, more specifically on Image restoration, My research primarily focuses on Image restoration and deep generative modelling. Specifically I use generative models for multiple downstream tasks including Image synthesis, Image editing, Image translation as well as Image restoration	
EDUCATION	Johns Hopkins University <i>Ph.D candidate in Electrical and Computer Engineering</i> <ul style="list-style-type: none">• Key courses: <i>Machine Intelligence, Vision as Bayesian Inference, Probabilistic Machine Learning, Compressed Sensing</i>• Ph.D advisor: Dr. Vishal M Patel	Maryland, USA 2021-Present
	Indian Institute of Technology Madras <i>B.Tech & M.Tech in Electrical Engineering</i> <ul style="list-style-type: none">• Key courses: <i>Deep Learning, Machine Learning, Probability, Statistics and Stochastic Processes, Linear Algebra for Engineers, Probabilistic Graphical Models</i>• Dual degree Thesis: ‘Uncontstrained Dynamic Scene Deblurring for Dual lens Cameras’• Dual Degree project advisor: Prof. A.N. Rajagopalan	Chennai, India 2015-2020
PUBLICATIONS	Nithin Gopalakrishnan Nair , Kangfu Mei, Vishal Patel, AT-DDPM: Restoring Faces degraded by Atmospheric Turbulence using Denoising Diffusion Probabilistic Models, IEEE WACV 2023 Nithin Gopalakrishnan Nair , Vishal Patel, T2V-DDPM: Thermal to Visible Face Translation using Denoising Diffusion Probabilistic Models, IEEE FG 2023 Nithin Gopalakrishnan Nair , Kangfu Mei, Vishal Patel, A comparison of different atmospheric turbulence simulation methods for image restoration, ICIP 2022 Nithin Gopalakrishnan Nair , Rajeev Yasarla, Vishal Patel, NBD-GAP: Non-Blind Image Deblurring Without Clean Target Images, ICIP 2022 Nithin Gopalakrishnan Nair , Rajeev Yasarla Vishal Patel, Confidence Guided	

Network For Atmospheric Turbulence Mitigation, ICIP 2021

Nithin Gopalakrishnan Nair, Kangfu Mei, Vishal Patel, Denoising Diffusion Restoration Priors, Under review 2022

Mahesh Mohan MR, **Nithin Gopalakrishnan Nair**, AN Rajagopalan, Deep Dynamic Scene Deblurring for Unconstrained Dual-Lens Cameras, TIP 2021

EXPERIENCE	Vision and Image Understanding Lab , Johns Hopkins University	
	<i>Graduate Research Assistant</i>	Sept 2020-Present
	Research in the department of Electrical and Computer Engineering on Supervised and Semi-supervised Image restoration techniques, advised by Dr. Vishal Patel.	
	Image Processing and Computer Vision Lab , IIT Madras	
	<i>Graduate Research Assistant</i>	May 2019-August 2020
	Research in the department of Electrical Engineering on Image restoration techniques focusing on dual lens cameras, advised by Dr. AN Rajagopalan.	
AWARDS AND SCHOLASTIC ACHIEVEMENTS	<ul style="list-style-type: none">• All India Rank 454 in Joint Engineering Entrance (Advanced) 2015 from over 1.5 million candidates.• State rank 4 in KEAM 2015 from over 200,000 candidates.• Awarded certificate for being among the top 0.1% in AISSCE 2015 by Central Board of Secondary Education, India.• Awarded Kishore Vaigyanik Protsahan Yojana Scholarship 2014, by the Government of India, given to top the 1000 from 30,000 candidates to pursue study in Sciences.	
SOFTWARE SKILLS	Languages:	Python, C++, L ^A T _E X
	Libraries:	PyTorch, TensorFlow, NumPy, OpenCV, Scikit-learn
	Applications and tools:	Git, MATLAB
CO-CURRICULAR ACTIVITIES	Social Initiatives	
	<ul style="list-style-type: none">• Volunteered for a project aimed at increasing content in vernacular languages in Wikipedia. Contributed around 10 articles for the same. (Sept 2015 - April 2016)• Led a team of 17 students for providing education to under-privileged children in high school. (Sept 2016 - April 2017)• Part of the managerial team of National Service Scheme, India, which oversaw 10 student-run projects. Mentored two projects personally as a member of the “Projects” team. (Aug 2017 - Jan 2018)	