

# Nithin C Babu

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## RESEARCH INTERESTS

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- **Visual Quality Assessment with Deep Learning:** Machine learning methods for assessing user/AI-generated content.

## EDUCATION

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- **Indian Institute of Science, Bangalore** Bangalore, Karnataka  
*Ph. D. in Electrical Communication Engineering | CGPA : 9.0/10*  
October 2020 - Present
  - Research Advisor : Dr. Rajiv Soundararajan
- **Government Engineering College, Thrissur** Thrissur, Kerala  
*Bachelor of Technology in Electronics and Communication Engineering | CGPA : 8.03/10*  
Aug 2015 - July 2019
- **Kendriya Vidyalaya Thrissur** Thrissur, Kerala  
*CBSE Senior Secondary Examination | Computer Science | Percentage : 94.4%*  
2015
- **Kendriya Vidyalaya Thrissur** Thrissur, Kerala  
*CBSE Secondary Examination | CGPA: 10/10*  
2013

## RESEARCH PUBLICATIONS

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- Vignesh Kannan, Sameer Malik, Nithin C. Babu, and Rajiv Soundararajan. Quality assessment of low-light restored images: A subjective study and an unsupervised model. *IEEE Access*, 11:68216–68230, July 2023
- Nithin C. Babu, Vignesh Kannan, and Rajiv Soundararajan. No reference opinion unaware quality assessment of authentically distorted images. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, pages 2459–2468, January 2023

## INTERNSHIPS AND TRAINING

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- **Elvicto Technologies Private Limited, Technopark, Trivandrum** July 2018
  - Project Intern for one month in designing and developing Smart Sensors based on IoT and LoRaWAN Technologies for Smart City developments.
- **National Institute of Electronics and Information Technology, Calicut** June 2017 - July 2017
  - Completed a one-week internship in Embedded System Design and IoT on Raspberry Pi.
- **Bharat Sanchar Nigam Limited, Thrissur** June 2016 - July 2016
  - Completed a two-week industrial training on ‘Telecom Technology’.

## ACADEMIC PROJECTS

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- **Adversarial attacks on Perceptual Quality Metrics trained on Authentically Distorted Images and Defense strategies:** June 2021
  - *Advanced Image Processing Course Project:* Analyzed the effect of adversarial attacks on deep-feature based perceptual quality metrics and employed adversarial training to improve performance the of deep-features.
- **Learning to See in the Dark:** January 2021
  - *Digital Image Processing Course Project:* Analysis of the paper, ‘Learning to See in the Dark’ by *Chen et al.* (CVPR 2018). Used the implementation to learn the basics of deep learning and its implementation in Python using Tensorflow. Analyzed the trained network and solved a limitation of the existing paper.
- **Automated Locker Management System for Laundry Services:** 2018 - 19
  - *B.Tech. final year Project:* Created a fully automated, scalable locker system for Black Swan Dry Cleaners company. Here, the customer can drop off his/her garments in the locker and pick them up when finished, being notified by an SMS to his/her mobile phone.

## TECHNICAL SKILLS

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- **Programming Languages:** Python, MATLAB, C++
- **Deep Learning and Data Science:** PyTorch, NumPy, Pandas
- **Operating Systems:** Windows, Linux

## HONORS AND AWARDS

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- Recipient of Prime Minister Scholarship Scheme 2015-’19 for all four years of B.Tech.
- 0.1% Merit in Mathematics in CBSE Senior Secondary Examination