

# Vandit Gajjar

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Webpage: [vanditg.github.io](http://vanditg.github.io)

## Education

Bachelor of Engineering - Electronics and Communication Engineering 2014 – 2018

**L. D. College of Engineering**

C.G.P.A: 8.22/100

Undergraduate Research: Description Based Person Identification in Unconstrained Surveillance

Advisor: Dr. Prof. Mehul S. Raval and Dr. Prof. Arun Nandurbarkar

## Interests

Computer Vision, Deep Learning, Machine Intelligence

## Research Experience

**Research Assistant** July 2018 - Present

School of Engineering and Applied Science, Ahmedabad University

- Supervision under Dr. Prof. Mehul S. Raval, working on “Visual Forecasting using Deep Learning and Reinforcement Learning”, “Image Super-Resolution using Generative Adversarial Networks”

**Computer Vision Research Project Student** August 2017 – June 2018

School of Engineering and Applied Science, Ahmedabad University

- Research Project under Dr. Prof. Mehul S. Raval, worked on “Description Based Person Identification in Unconstrained Surveillance: Using Person’s Age, Gender, Facial Expression, Height, Cloth type and Color”

**Meditab AI Research** November 2017 – April 2018

Dosepack LLC, Meditab Software Inc.

- Internship with Meditab AI Research Team, worked on Medical Pill Detection and Segmentation

**Undergraduate Student Researcher** May 2017 - Present

Computer Vision Group – L. D. C. E.

- Undergraduate Research Projects: “Using Visual Saliency to Improve Human Detection and Tracking with CNNs”, “How to use Human Vision System to Improve Object Detection/Segmentation”

**Summer Research Intern** June 2017 – August 2017

Department of Electrical Engineering, Kansas State University

- Summer intern under Dr. Prof. Dwight Day and Dr. Prof. Kim Fowler, worked on “Hand Gesture Real Time Paint Tool-Box”

**Robotics Intern** November 2015 – September 2016

GTU Robocon Team, Gujarat Technological University

- Internship under Prof. Raj Hakani and with GTU Robocon Robotics Team, working on Line Follower using PID Controller and Image Processing

## Publications

[1] Hiren Galiyawala, Kenil Shah, **Vandit Gajjar**, Mehul S. Raval, . *Person Retrieval in Surveillance Video using Height, Color and Gender*, in Semantic Person Retrieval in Surveillance using Soft Biometrics Challenge in Conjunction with IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS), 2018. (**Oral Presentation**)

[2] **Vandit Gajjar\***, Yash Khandhediya\*, Ayesha Gurnani, Viraj Mavani, Mehul S. Raval. *ViS-Hud: Using Visual Saliency to Improve Human Detection with Convolutional Neural Networks*, in IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRw), 2018 (**Poster Presentation**)

\*Authors Contributed Equally

[3] Ayesha Gurnani\*, **Vandit Gajjar\***, Viraj Mavani\*, Yash Khandhediya\*. *VEGAC: Visual Saliency-based Age, Gender, and Facial Expression Classification Using Convolutional Neural Networks*, in ArXiv Pre-Print, 2018

\*Authors Contributed Equally

[4] **Vandit Gajjar**. *2<sup>B</sup>3<sup>C</sup>: 2 Box 3 Crop of Facial Image for Gender Classification with Convolutional Networks*, in ArXiv Pre-Print, 2018

[5] **Vandit Gajjar**, Ayesha Gurnani, Yash Khandhediya. *Human Detection and Tracking for Video Surveillance: A Cognitive Science Approach*, in IEEE/CVF International Conference on Computer Vision Workshops (ICCVw), 2017 (**Poster Presentation**)

[6] Ayesha Gurnani, Viraj Mavani, **Vandit Gajjar**, Yash Khandhediya. *Flower Categorization using Deep Convolutional Neural Networks*, in ArXiv Pre-Print, 2017

[7] **Vandit Gajjar**, Viraj Mavani, Ayesha Gurnani. *Hand Gesture Real Time Paint Tool-Box*, in IEEE International Conference on Power, Control, Signal and Instrumentation Engineering (ICPCSI), 2017 (**Spotlight Presentation**)

[8] Yash Khandhediya, Karishma Sav, Vandit Gajjar. *Human Detection for Night Surveillance using Adaptive Background Subtracted Image*, in National Conference on Advances in Computer Science Engineering and Technology (NCACSET), 2017 (**Oral Presentation**)

(CVPRw and ICCVw are recognized as peer-reviewed conference workshops; typically have acceptance-rate below 35 % and according to Google Scholar metrics CVPRw and ICCVw have h5-index of 47 and 24 respectively.)

## Coursework

### Mathematics

Linear Algebra, Probability and Statistics, Ordinary/Partial Differential Equations

### Signal Processing

Signals and Systems, Digital Signal Processing, Digital Communication

### Computer Vision/Machine Learning

Image Processing, Deep Learning, and Machine Learning for Computer vision (Independent Coursework)

## Teaching Experience

### CSP 502: Computer Vision

Teaching Assistant with Dr. Prof. Mehul S. Raval

School of Engineering and Applied Science, Ahmedabad University Fall 2018

Topics: Histogram Equalization, Human Visual System Model, Feature Extraction, Object Detection & Segmentation, Convolutional Neural Networks, Recurrent Neural Networks, Deep Learning in Computer Vision and it's Applications

**CSP 200: Signals and Systems**

Teaching Assistant with Dr. Prof. Mehul S. Raval

School of Engineering and Applied Science, Ahmedabad University Fall 2018

Topics: Continuous & Discrete-time, Exponential, Sinusoidal Signals, Linear Time-invariant Systems, Fourier Series, Fourier Transform, Laplace Transform, Z-transform

**CSC 331: Computer Networks Lab**

Teaching Assistant with Prof. Siddhi Shah

School of Engineering and Applied Science, Ahmedabad University Fall 2018

Topics: Network Topology, Network Nodes, Network Structures, Communication Protocols, PAN, LAN, HAN, SAN, CAN, MAN, WAN, and VPN, Routing, Network Surveillance, End-to-End Encryption

**Professional Activities**

Reviewer for CVPR 2018 Mutual Benefits of Cognitive and Computer Vision workshop

**Technical Skills***Languages:* Python, C*Tools / Libraries:* Keras, TensorFlow, OpenCV, Git*Platforms:* Windows, Linux*Editing Tools:* Adobe Photoshop, Adobe Lightroom, Adobe After Effects, Adobe Premier Pro**Honors & Awards**

Travel Award, Mutual Benefits of Cognitive and Computer Vision Workshop, CVPR	2018
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Travel Award, Mutual Benefits of Cognitive and Computer Vision Workshop, ICCV	2017
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Travel Award, IEEE International Conference on Power, Control, Signal and Instrumentation Engineering (ICPCSI)	2017
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Design and Technology Manager Award by GTU for excellent managerial performance for GTU Central Techfest	2017
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Scholarship granted by Ministry of Electronics and Information Technology, Govt. of India for excellent academic performance (84.3%)	2013-14
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Sheth C. N. Best Student Award for achieving high GPA score (91.4%) in my high school	2011-12
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**Language Skills****English**, International English Language Testing System**Hindi**, National Language**Gujarati**, Native**Extra-Curricular Activities**

<b>Central Coordinator</b> , GTU Central Techfest, Gujarat Technological University	2015 & 2017
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<b>Executive Committee Member</b> , IETE Student Branch, L.D.C.E	2016-2017
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**Photographer,** Vox Populi Magazine, L.D.C.E 2016-2018

**Designer and Student Volunteer,** IEEE Student Branch, L.D.C.E 2015-2017

**Student Coordinator,** XITIJ GTU Cultural Festival, Gujarat 2015 & 2016  
Technological University

## References

**Mehul S. Raval,** Associate Professor, School of Engineering and Applied Science,  
Ahmedabad University  
**Arun Nandurbarkar** Associate Professor, L. D. College of Engineering  
**Raj Hakani** Assistant Professor and GTU Robocon Team Head, CiC3,  
Gujarat Technological University

Last updated: September 24, 2018