

# Vandit Gajjar

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10 Matilda St  
Eastwood, SA 5063  
+61 470 519 892

<https://vanditg.github.io/>

vanditjyotindra.gajjar@student.adelaide.edu.au | gajjarvandit@gmail.com

## RESEARCH INTERESTS

My research lies at the intersection of computer vision and deep learning. I develop algorithms which uses semantic description to retrieve a person in video surveillance.

## EDUCATION

**The University of Adelaide**, Adelaide, Australia  
*Master of Computing and Innovation*, Jul, 2019 - Present

**Kansas State University**, Kansas, United States of America  
*International Experience Program*, June, 2017 - August, 2017

**L. D. College of Engineering**, Ahmedabad, India  
*Bachelor of Engineering*, Electronics and Communication, July, 2014 - June, 2018

## EXPERIENCE

**Teaching Assistant** August 2018 - May 2019  
School of Engineering and Applied Science, Ahmedabad University India  
Worked as a full-time teaching assistant for undergraduate and graduate-level courses in Information and Communications Technology field.

**Research Assistant** July 2018 - December 2018  
School of Engineering and Applied Science, Ahmedabad University India  
Worked with Mehul S. Raval and Hiren Galiyawala on description based person identification in unconstrained surveillance video.

**Artificial Intelligence Intern** November 2017 - April 2018  
Meditab AI Research, Dosepack LLP, Meditab Software Inc. India  
Worked with Param Rajpura and Yash Khandhediya on Medical Pill Detection and Segmentation.

**Visiting Student** September 2017 - June 2018  
School of Engineering and Applied Science, Ahmedabad University India  
Worked with Mehul S. Raval on person's facial attribute classification.

**Undergraduate Student Researcher** May 2017 - April 2018  
Computer Vision Group, L. D. College of Engineering India  
Conducted research activities on research projects include: Using Visual Saliency to Improve Human Detection and Tracking with CNNs, How to use Human Vision System to Improve Object Detection/Segmentation.

**Robotics Intern** November 2015 - September 2016  
GTU Robocon Team, Gujarat Technological University India  
Worked with Prof. Raj Hakani and with GTU Robocon Robotics Team on Line Follower using PID Controller and Image Processing for ABU Robocon - 2016 Competition (National-level).

## PUBLICATIONS

[1] **SAF- BAGE: Salient Approach for Facial Soft-Biometric Classification - Age, Gender, and Facial Expression**

*Winter Conference on Applications of Computer Vision (WACV) 2019 (Oral)*

Ayesha Gurnani\*, Kenil Shah\*, **Vandit Gajjar\***, Viraj Mavani\*, Yash Khandhediya\*

(\* Authors listed alphabetically and have contributed equally.)

[2] **Person Retrieval in Surveillance Video using Height, Color and Gender**

*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) (Third in Semantic Person Retrieval Challenge)*

Hiren Galiyawala, Kenil Shah, **Vandit Gajjar**, Mehul S. Raval

[3] **ViS-Hud: Using Visual Saliency to Improve Human Detection with Convolutional Neural Networks**

*Computer Vision and Pattern Recognition Workshops (CVPRw), 2018*

**Vandit Gajjar\***, Yash Khandhediya\*, Ayesha Gurnani, Viraj Mavani, Mehul S. Raval

(\* Authors contributed equally.)

[4] **Human Detection and Tracking for Video Surveillance: A Cognitive Science Approach**

*International Conference on Computer Vision Workshops (ICCVw), 2017*

**Vandit Gajjar**, Ayesha Gurnani, Yash Khandhediya

[5] **Hand Gesture Real Time Paint Tool-Box**

*International Conference on Power, Control, Signal and Instrumentation Engineering (ICPCSI), 2017 (Spotlight)*

**Vandit Gajjar**, Viraj Mavani, Ayesha Gurnani

[6] **Human Detection for Night Surveillance using Adaptive Background Subtracted Image**

*National Conference on Advances in Computer Science Engineering and Technology (NCACSET), 2017*

Yash Khandhediya, Karishma Sav, **Vandit Gajjar**

## MEDIA COVERAGE

**Person Retrieval in Surveillance Video using Height, Color and Gender** Fall 2018

*New Scientist, Digital Trends, The Next Web, Tech The Lead, Import AI by Jack Clark, Business Recorder, RT*

## SELECTED AWARDS AND HONOURS

- **The 2019 University of Adelaide Global Citizens Scholarship** for postgraduate studies to demonstrate an understanding of, and commitment to, global citizenship. 2019 - 2021
- **Outstanding Teaching Assistant Award - Ahmedabad University** for Advanced Statistics, Computer Vision and Machine Learning courses. Fall 2018, Winter 2019
- **3rd place** in Semantic Person Retrieval in Surveillance using Soft Biometrics in Conjunction with IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS), 2018. 2018
- **Travel Award**, IEEE International Conference on Power, Control, Signal and Instrumentation Engineering (ICPCSI) 2017
- **Design and Technology Manager Award** for excellent managerial performance for GTU Central Techfest 2017
- **Protsahan Puraskar Scholarship** for undergraduate studies. 2014 - 2018

## INVITED TALKS AND WORKSHOPS

*SAF- BAGE: Salient Approach for Facial Soft-Biometric Classification - Age, Gender, and Facial Expression*, at Workshop on Demographic Variations in Performance of Biometric Algorithms in conjunction with IEEE WACV 2019

*Workshop on Machine Learning using Python in Tensorflow and Keras*, at Ingenium, Ahmedabad University 2019

<b>TEACHING EXPERIENCE</b>	<b>MAT502: Advanced Statistics</b> Winter 2019 School of Engineering and Applied Science, Ahmedabad University Conducted weekly office hours to help students with concepts.
	<b>CSC105: Introduction to Computation and Programming Lab</b> Winter 2019 School of Engineering and Applied Science, Ahmedabad University Responsibilities included teaching discussion session 1 hour/week, teaching a lab session 3 hours/week, and grading exams.
	<b>CSC523: Machine Learning</b> Winter 2019 School of Engineering and Applied Science, Ahmedabad University Assisted in creating theory and coding assignments. Conducted weekly office hours to help students with homework and concepts.
	<b>MAT202: Probability and Random Processes</b> Winter 2019 School of Engineering and Applied Science, Ahmedabad University Conducted weekly office hours involving blackboard teaching and tutorial sessions.
	<b>CSP 502: Computer Vision</b> Fall 2018 School of Engineering and Applied Science, Ahmedabad University Conducted weekly office hours to help students with homework and concepts.
	<b>CSP 200: Signals and Systems</b> Fall 2018 School of Engineering and Applied Science, Ahmedabad University Responsibilities included creating assignments, teaching discussion session 1 hour/week, teaching a tutorial session 4 hours/week, and grading assignments.
<b>TECHNICAL SKILLS</b>	<b>CSC 331: Computer Networks Lab</b> Fall 2018 School of Engineering and Applied Science, Ahmedabad University Responsibilities included teaching a lab session 2 hours/week, and grading assignments. Conducted weekly office hours to help students with assignments.
	<b>Programming Languages</b> - Python, C++, Java
	<b>Programming Packages</b> - Tensorflow, Keras, PyTorch, OpenCV, Matplotlib
<b>SERVICE AND LEADERSHIP</b>	<b>Other</b> - Git, SVN, LaTeX, HTML, Adobe Photoshop, Lightroom
	<b>Reviewer</b> <i>WACV 2020, ICCV 2019, CVPRw 2018</i>
	<b>CVG-LDCE Undergraduate Mentor</b> 2018 <i>Undergrads from underrepresented groups who are considering a career in research</i>
<b>EXTRA CURRICULAR</b>	<b>Central Coordinator</b> , GTU Central Techfest, GTU 2015, 2017
	<b>President</b> , IETE Student Branch, L.D.C.E 2016-2017
	<b>Photographer</b> , Vox Populi Magazine, L.D.C.E 2016-2018
	<b>Student Coordinator</b> , XITIJ GTU Cultural Festival, GTU 2015, 2016
<b>REFERENCES</b>	<b>Mehul S. Raval</b> Professor Information and communications technology, PDPU, India mehul.raval@sot.pdpu.ac.in
	<b>Yash Khandhediya</b> Applied Research Scientist Dosepack India LLP, Meditab Software Inc., India yashk@dosepack.com

Last Updated: August 06, 2019