

SAHIL B SHAH

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EDUCATION	Carnegie Mellon University, Pittsburgh, USA Robotics Institute- MS in Robotic Systems Development <i>James R. Swartz Entrepreneurial Fellow</i>	December '15 GPA: 3.9
	Birla Institute of Technology & Science, Pilani, India Bachelor of Engineering (Hons.) Computer Science <i>Undergraduate Thesis: Pulse rate estimation from facial videos</i>	December '12 First Division
EXPERIENCE	Engineer @ Apple Inc., California, USA Special Projects Group <ul style="list-style-type: none">Research on Apple's next breakthrough product <i>Tech: C++, Computer Vision, Deep Learning, 3D geometry, State Estimation, Sensor Fusion</i>	Feb '16 – present
	Computer Vision Intern @ Canary Connect Inc., New York, USA <i>Canary is a complete security system packed into a single device you control from your phone</i> Image Registration; Object detection <ul style="list-style-type: none">Implemented a system to automatically realign regions from one view of the camera to the otherResearched, developed and tested several algorithms for object detection <i>Tech: Multiview Camera Geometry, Convolution Neural Networks, Deep Learning, OpenCV, Torch</i>	May '15 – Aug '15
	Technical Staff (employee #15) @ Tonbo Imaging, Bangalore, India <i>Tonbo Imaging designs, builds and deploys advanced imaging and sensor systems for the defense industry</i> Video Stabilization (video: vimeo.com/sahilshah/imu-video-stab-2) <ul style="list-style-type: none">Implemented real time image stabilization using an IMU (accelerometer and gyroscope)Doubled the frame rate over previous methodsPrototyped the entire system on TI DM6467 microprocessor and Invensense IMU <i>Tech: C++, Multiview Camera Geometry, Kalman filters, sensor fusion, Qt, Embedded Programming</i>	Jul '13 - May '14
	Research Intern @ Neuroinformatics & Cognitive Robotics Lab, TU Ilmenau, Ilmenau, Germany Pulse Rate Estimation from Facial Video (deck: slideshare.net/sahilshah15/pulse-detector) <ul style="list-style-type: none">Implemented a system to estimate the pulse rate of a person using facial videos in real timeDeployed on a robot that assisted residents at home for the aged <i>Tech: C++, Independent Component Analysis, Fast Fourier Transforms, Face Detection</i>	Sep '12 - Nov '12
	Autonomous Quadcopter Docking & Charging System Using computer vision and GPS guidance, enable a UAV to land on a docking station with wireless charging capabilities for autonomous drone operation (video: https://vimeo.com/128076716)	Aug '14 - May '15
PROJECTS	Artificial Intelligence & Machine Learning Techniques Implemented Simulated Annealing, ID3 Decision Tree Learning, K means clustering, etc.	Jan '12 - May '12
RELEVANT COURSEWORK	Computer Vision; Machine Learning; Robot Autonomy; Visual Learning & Recognition; Artificial Intelligence; Geometry Methods in Computer Vision; Data Structures & Algorithms; Operating Systems;	
SKILLS	Languages: C, C++, Java, MATLAB, Python, Ruby, Javascript, HTML/CSS Frameworks & Tools: MATLAB, Android Apps, Unix Utilities, Rails, Heroku, OpenCV, Torch, ROS	