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## SAHIL B SHAH

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Apt C

Pittsburgh, PA, 15232

<b>OBJECTIVE</b>	Internship in a high-tech product startup in areas of computer vision, robotics or product design.		
<b>EDUCATION</b>	<b>Carnegie Mellon University, Pittsburgh</b>		<i>December 2015</i>
	Robotics Institute- MS in Robotic Systems Development		
	<b>Birla Institute of Technology and Science, Pilani, India</b>		<i>December 2012</i>
	Bachelor of Engineering (Hons.) Computer Science		<i>First Division</i>
	Undergraduate Thesis: Pulse rate estimation from facial videos		
<b>SKILLS</b>	<b>Languages:</b>	C, C++, Java, MATLAB, Ruby, Javascript, Python, HTML/CSS	
	<b>Frameworks &amp; Tools:</b>	MATLAB, Android Apps, Unix Utilities, Rails, Heroku, OpenCV	
<b>RELEVANT COURSEWORK</b>	Computer Vision*	Systems Engineering*	Machine Learning
	Artificial Intelligence	Mobility, Manipulation & Control*	Data Structures & Algorithms
<b>EXPERIENCE</b>	<b>Tonbo Imaging, Bangalore, India</b>		<i>Jul 2013 - Jun 2014</i>
	Member of Technical Staff		
	Video Stabilization (watch: <a href="http://vimeo.com/sahilshah/imu-video-stab-2">vimeo.com/sahilshah/imu-video-stab-2</a> )		
	<ul style="list-style-type: none"><li>Implemented real time image stabilization for handheld cameras and UAVs using Inertial Measurement Units (accelerometer and gyroscope)</li><li>Increased frame rate by two times over previous methods</li><li>Prototyped the entire system on TI DM6467 microprocessor and Invensense MPU</li></ul>		
	<i>Tech: C++, Kalman filters, sensor fusion, Qt Libraries, Embedded Systems Programming</i>		
	<b>Neuroinformatics &amp; Cognitive Robotics Lab, TU Ilmenau, Illemanu, Germany</b>		<i>Sep 2012 - Nov 2012</i>
	Research Intern		
	Pulse Rate Estimation from Facial Video (deck: <a href="http://slideshare.net/sahilshah15/pulse-detector">slideshare.net/sahilshah15/pulse-detector</a> )		
	<ul style="list-style-type: none"><li>Implemented a real time application to estimate the pulse rate of a person using video of his face</li><li>Deployed on a robot that assisted residents at home for the aged</li></ul>		
	<i>Tech: Literature Review, C++, Independent Component Analysis, Fast Fourier Transforms, Face Detection (Viola Jones, Active Appearance Model)</i>		
	<b>Goldman Sachs &amp; Co., Bangalore, India</b>		<i>May 2013 - Jul 2013</i>
	Summer Analyst		
	Apache Solr		
	<ul style="list-style-type: none"><li>Customized the 'More Like This' feature of Solr to make queries on a database of 7M+ XML records more effective</li><li>Reduced the steps required to analyze suspicious transactions by a factor of 2</li></ul>		
	<i>Tech: Java, XML, Information Retrieval, tf*idf algorithm, similarity scores</i>		
<b>PROJECTS</b>	<b>Autonomous Quadcopter Docking &amp; Charging System</b>		<i>Aug 2014 - May 2015</i>
	Using the fine precision of computer vision to supplement GPS guidance and enable a UAV to land precisely on a custom manufactured docking station with charging capabilities		
	<b>Compiler Construction</b>		<i>Jan 2012 - May 2012</i>
<b>OTHER INTERESTS</b>	Implemented compiler logic in C for an experimental programming language		
	Reading, startups, physics, gadgets, basketball (college captain, gold medalist), running (half marathon), squash		