

Aniruddha A. Kembhavi

CONTACT INFORMATION	3364 A.V. Williams Building, College Park, MD 20742	<i>Phone:</i> (202) 341-7117 <i>Email:</i> anikem@umd.edu <i>WWW:</i> www.uniacs.umd.edu/~ani
OBJECTIVE	To apply and expand my knowledge of computer vision in a workplace environment during an internship	
EDUCATION	University of Maryland, College Park, MD USA Ph.D. program in Electrical Engineering <ul style="list-style-type: none">• Enrolled: Aug 2004 - present• Advisor: Prof. Larry S. Davis• Current GPA: 3.92 Government College of Engineering, Pune, University of Pune, India B.E., Electronics and Telecommunications Engineering <ul style="list-style-type: none">• Enrolled: July 2000 - July 2004• Stood 2nd out of 1600 students in my junior year and within the top 10 students in my senior year.	
WORK EXPERIENCE	University of Maryland, College Park - Computer Vision <i>Graduate Research Assistant</i> Nov 2004 - present Research Projects: <ul style="list-style-type: none">• Tracking and Identity Maintenance: We develop algorithms to improve the tracking and recognition of humans in a single as well as multiple camera framework. We incorporate motion and appearance models as well as learned priors on traffic movements between cameras. Our appearance models include subjective descriptions of appearance of individuals that we obtain from a detailed clothing segmentation. We are also working on incorporating coupling information between targets in the scene.• The Bowerbird Project: Sociobiologists collect huge volumes of video to study animal behavior. Our collaborators work with over 30,000 hours of video of Satin Bowerbird courtship videos. We improve on off-the-shelf tracking algorithms that prove incapable of handling videos characterized by poor quality, drastic illumination changes, non-stationary scenery and foreground objects that become motionless for long stretches of time.• Recognizing Actions from Static Images: Motivated by psychological studies of human vision, we present an approach to recognizing human actions from static images that combines human segmentation and pose analysis with scene and object recognition. ObjectVideo, Inc. Reston, Virginia - Computer Vision <i>Internship</i> June 2006 - Aug 2006 Unusual Event Detection: We characterize events in terms of spatial locations of objects in an image over time. Projecting a sequence of binary images onto a lower dimensional subspace yields an eigentrajectory. A particle filter framework is used to incrementally match temporal trajectories, build models of usual activities and classify unusual ones.	

Cirrus Logic Software Ltd. Pune, India - Audio Processing
Internship **May 2003 - May 2004**

Incorporated the wavelet transform in audio compression as opposed to present day DCT and FFT based compression schemes. Increased the encoding speed by substituting the detailed psychoacoustic analysis with a wavelet-coefficient based statistical analysis.

University of Pune, India - Robotics
Internship **Sep 2002 - Apr 2003**

2nd prize recipient at Indian Institute of Technology (IIT-Bombay) at All-India Robotics Competition in 'Autonomous robot' category. Our robot is designed to solve and run a maze in the shortest possible time.

Government College of Engineering, Pune - Steganography
Research experience for undergraduates **Jul 2002 - Sep 2002**

Devised a method to compare the original image with the new image (containing hidden data) based on the local matrix gradient.

INTERESTS Computer vision, Pattern recognition, Machine Learning

GRADUATE COURSE WORK	Random processes in communications	Advanced DSP
	Image processing and understanding	Pattern recognition
	Computer vision	Medical image analysis
	Estimation and detection theory	Computer architecture
	Object recognition and representation	Graphical Models

COMPUTER
SKILLS • Languages and packages: C, C++, MATLAB, OpenCV
 • Operating Systems: Windows, Linux

HONORS AND
AWARDS • 2nd prize recipient at Indian Institute of Technology (IIT-Bombay) at the **All-India Robotics Competition** in the 'Autonomous robot' category.

 • Secured the 2nd rank out of 1600 students in my junior year.

 • Recipient of the National Talent Search scholarship awarded by the Government of India to the top 0.01% students in the country at the high school level.

 • Secured the 1st prize at the **All-India Physics Lecture Competition** organised by the Indian Physics Teachers Association for my lecture titled *Radar and Stealth Bombers*.