

ABHIJIT BENDALE

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EDUCATION

University of Colorado at Colorado Springs

PhD in Computer Science (2011 - 2015)

Advisor: Prof. Terrance Boult, El Pomar Chair

Thesis: Open World Recognition

(defended successfully on 09/03/2015)

University of Colorado at Colorado Springs

Masters in Computer Science (2007 - 2009)

GPA: 3.54/4.00

University of Pune

Bachelor of Engineering in Electronics and Telecommunications (2003 - 2007)

GPA: 65.66 % graduated with First Class (Top 2 % of graduating class)

HONORS AND AWARDS

1. IEEE BTAS 2015 Doctoral Consortium Award. Given to approx 10 top PhD students in Biometrics from all over the world.
2. Invited to attend NSF Data Science Workshop 2015. Awarded to top 100 PhD students from STEM areas in United States.
3. CVPR 2015 Doctoral Consortium Award. Awarded to approx. 35 top PhD students in Computer Vision from all over the world.
4. Google App Award for Project Vision Blocks at MIT Media Lab (<http://bit.ly/VbyPTK>)
5. NVIDIA 2013 CUDA Teaching Center of Excellence for UCCS
6. NVIDIA 2011 Tegra Prototype Academic Partner for "Ubiquitous Computer Vision"
7. Graduate School Fellowship from University of Colorado for 2012-2015 (highly selective fellowship given to 15 students every year out of 1600+ students across all disciplines).
8. UCCS Graduate School Association Travel Award 2013, 2015
9. Awarded Dhirubhai Ambani Fellowship for academic excellence in undergraduate studies in University of Pune
10. Silver Medal at the National Talent Search Exam securing 92% in Mathematics in the India.

PUBLICATIONS

1. A. Bendale, T. Boult "What do you do when you know that you dont know?" Biometrics Workshop, CVPR 2016
2. A. Bendale, T. Boult "Towards Open Set Deep Networks " CVPR 2016 (spotlight oral, 9.7% acceptance rate)
3. A. Bendale, T. Boult "Towards Open World Recognition" CVPR 2015 (oral, 3.3% acceptance rate)
4. A. Bendale, T. Boult "Reliable Posterior Probability Estimation for Streaming Face Recognition" Biometrics Workshop, CVPR 2014 (28.81% acceptance rate)
5. A. Bendale, K. Chiu, K. Marwah, R. Raskar, "VisionBlocks: A Social Computer Vision Platform" SocialCom 2011 (9.8% acceptance rate)
6. A. Bendale, T. Boult "*id - Privacy* in Large Scale Biometrics System", WIFS 2010 (28% acceptance rate)

7. W. Scheirer, A. Bendale, and T. Boulton, "Predicting Biometric Facial Recognition Failure With Similarity Surfaces and SVM" Biometrics Workshop, CVPR 2008 (28% acceptance rate)

In Preparation/Review/Tech Reports

1. A. Bendale, M. Guenther, T. Boulton, S. Marcel "Incremental Model Adaptation for Face Recognition" IEEE Trans. on Information Forensics and Security (in preparation)
2. A. Bendale "Open World Recognition", PhD Thesis 2015, University of Colorado at Colorado Springs (defended successfully on 09/03/2015)
3. A. Bendale, N. Pinto, J. Dicarlo "Benchmarking Pedestrian Detection Systems" Tech Report (of work at MIT) 2010
4. A. Bendale, "ForestFingers: Multi-Fingerprint recognition without segmentation", Masters Thesis, 2009

RESEARCH EXPERIENCE

Research Scientist	Samsung Research America Mountain View, CA	Nov 2015 - Present
Supervisor: Pranav Mistry, Vice President Developing and leading Computer Vision and Machine Learning Efforts		
PhD Intern	SRI International (Sarnoff) Princeton, NJ	June 2014 - Aug 2014
Advisor: Jayan Eledath, Dr. Harpreet Shawney Developed a novel personal photo-collection organization system based on image clustering. Wrote algorithms to summarize large personal photo-collections into context specific picture storylines.		
Senior Scientist	Lingonautics Danville, CA	April 2014 - Sept 2014
Advisor: Dr. Jeffery Davitz Developed machine learning based sentiment classification system for social media. This system was used to develop programmatic marketing tools for ad-targeting/retargeting. Responsible for developing infrastructure and overall research direction for Machine Learning. Research team includes 4 PhDs.		
Visiting Student	Idiap Research Institute (EPFL) Martigny, Switzerland	Oct 2013 - Jan 2014
Advisor: Dr. Sebastian Marcel Developed large scale incremental generative and discriminative learning systems for face recognition in the wild. The work was developed as a part of European project Biometrics Evaluation and Testing (BEAT) under the European Commission 7th Framework Program (FP7).		
Machine Learning Scientist	Solaria Inc San Francisco, CA	Dec 2012 - Jan 2012
Advisor: Dr. Conor McGann Developed supervised classification algorithms for analyzing Social Media Data (NLP). Developed feature extraction and learning infrastructure (online learning, SVMs, large-scale multi-class classification, batch learning). Developed framework for large scale online/incremental learning. This was part of short-term internship with Solaria Inc.		
Research Assistant	Vision and Security Technology Lab Colorado Springs, CO	Aug 2011 - Oct 2015

Advisor: Prof. Terrance Boulton

Worked towards my PhD on multiple problems in computer vision and machine learning. More specifically involved in developing methods to make classifier performance robust in operational conditions (missing data, changing data, online and weakly supervised learning)

Researcher (Visiting Scholar) MIT Media Lab Aug 2010 - Aug 2011
Cambridge, MA

Advisor: Prof. Ramesh Raskar (Associate Professor of Media Arts and Sciences, MIT Media Lab)
Developed tools and techniques to take computer vision to masses. Developed Business plan for MIT 100K Business competition for my work. Organized demos and workshops for Cambridge Science Festival for MIT Media Lab as a part of science outreach. Followed by this, I was a short term visiting student in Prof. Pattie Maes's group in MIT Media Lab (from October 2011 - January 2012)

Visiting Student MIT July 2009 - July 2010
Cambridge, MA

Advisor: Prof. James DiCarlo (Head, Department of Brain and Cognitive Science, MIT)
Worked on Project for establishing benchmarks for object recognition systems with emphasis on pedestrian detection systems. The research was integral part of DARPA's NeoVision project. Open Source Development in python for computer vision and machine learning.

Research Assistant VAST Lab, UCCS August 2007 - Dec 2009
Colorado Springs, CO

Advisor: Prof. Terrance Boulton, El Pomar Chair of Computer Science, UCCS
Developed first of its kind multi-fingerprint recognition system. My role included core algorithm design and research, software development and evaluation. Closely collaborated with Securics Inc., a local company specializing in privacy enhanced biometrics.

TEACHING

1. CS2060 Programming with C (Sole Instructor) - Summer 2013, Dept. of Computer Science, UCCS. Class Size - 21. Instruction mode : In Person
2. CS4440/5440 Big Data (jointly with Prof. Terrance Boulton) - Spring 2014. Class Size - 21. Cross-listed senior undergraduate/graduate course. Instruction mode: In Person.

SKILLS

C, C++, Python, Shell Scripting, CUDA, MATLAB, OpenCV, Hadoop (preliminary), Amazon EC2 tools, Scientific Programming packages, Weka, NumPy, SciPy, etc.

SERVICE

Journals: Neurocomputing (Elsevier Journal), Journal of Visual Communication and Image Representation, IEEE Trans. on Information Forensics and Security, IEEE Trans. on Neural Networks and Learning Systems, International Journal of Computer Vision

Conferences: SocialCom 2011, IJCB 2014, ICB 2015, CVPR 2015, CVPR 2016, ECCV 2016

STUDENT ADVISING

Doctoral Committee Tri Doan (UCCS)

RESEARCH INTERESTS

Computer Vision: Object Recognition, Face Recognition and Biometrics, Performance Evaluation, Applications

Machine Learning: Large Scale Learning, Incremental Learning, Online Learning, Deep Learning

REFERENCES

Available on request.