Archith John Bency

Personal Data

webpage: http://www.ece.ucsb.edu/~archith

Research Interests

Computer Vision, Pattern Recognition, Image/Video Analytics, Deep Neural Networks, Transfer Learning, Weak Supervision.

Relevant Coursework

Pattern Recognition, Computer Vision, Image Processing, Digital Signal Processing, Stochastic Processes, Optimal Estimation and Filtering, Computational Photography, Mobile Imaging

Education

PhD in Electrical and Computer Engineering, University of California, Santa Barbara
GPA : 3.96/4.00

Santa Barbara, CA

(2014 - Present)

Master of Science in Electrical and Computer Engineering, University of California, Santa Barbara
GPA : 3.96/4.00

Santa Barbara, CA

(2012-2014)

Bachelor of Technology in Electrical Engineering, Indian Institute of Technology Bombay
GPA : 8.92/10.00

Mumbai, India

(2005-2009)

Work Experience

Present
Apr 2013

Graduate Student Researcher at **University of California, Santa Barbara, CA**

Research and develop methods for Video and Image analysis tasks including Object Tracking in Videos, Weakly Supervised Object Detection in Images and Action Recognition in Videos.

Sep 2016
Jun 2016

Summer Research Intern at **IBM Thomas J. Watson Research Center, Yorktown Heights, NY**

Researched techniques to model Geo-spatial data such as Housing prices through Deep Convolutional Neural Networks and Satellite Images.

Aug 2015
May 2015

Summer Research Intern at **U.S. Army Research Laboratory, Adelphi, MD**

Developed Weakly Supervised methods for Object Localization using Deep Convolutional Neural Networks.

Jul 2009
May 2012

Software System Engineer at **Texas Instruments, Bangalore, India**

Involved in development of Multimedia software libraries on TI 81XX DaVinci line of System on Chips (SoC). Other projects included Digital Video Recorder SDK development and system software bring-up on new SoC variants.

Software Skills

Platforms	Windows, Linux, OS X
Languages	C, C++, Python, MATLAB
Packages	Tensorflow, Caffe, Scikit-Learn, Android SDK, Eclipse, Git, Latex

Achievements and Distinctions

- Awarded **ECE Dissertation Fellowship** by the Department of Electrical and Computer Engineering, UCSB for Spring 2017.
- **Reviewer** for IEEE Transactions on Circuits and Systems for Video Technology.
- Awarded **Doctoral Student Travel Grant** by the Academic Senate of UCSB to attend ECCV 2016.
- **Teaching Assistant** and **Grader** for Image Processing and Computer Vision courses offered by ECE department at UCSB.
- Mentored a summer intern as part of the ICB SABRE program in 2014. Student: Sebastian Rojas, Worcester Polytechnic Institute, MA. Project title: 'Open Source Hardware-Software Interface for a Pressure Mat'.
- Ranked **81st** (out of around 200,000 candidates) in the Indian Institute of Technology - Joint Entrance Examination, 2005.
- One of the **top 50 students** selected for **International Physics Olympiad Orientation cum Selection Camp** for the Indian team, Mumbai, 2005.
- Ranked **19th** in the **Regional Mathematics Olympiad**, Mumbai, 2004.

Publications

- Rallapalli, S., Qiu, H., **Bency, A. J.**, Karthikeyan, S., Govindan, R., Manjunath, B.S., & Urgaonkar, R., Poster Presentation: Are Very Deep Neural Networks Feasible on Mobile Devices?, *ACM Workshop on Mobile Computing Systems and Applications*, 2016
- **Bency, A. J.**, Karthikeyan, S., De Leo, C., Sunderrajan, S., & Manjunath, B. S., Search Tracker: Human-derived object tracking in-the-wild through large-scale search and retrieval, *IEEE Transactions on Circuits and Systems for Video Technology*, 2016
- **Bency, A. J.**, Kwon, H., Lee, H., Karthikeyan, S., & Manjunath, B. S., Weakly Supervised Localization using Deep Feature Maps, CoRR abs/1603.00489, *European Conference on Computer Vision*, 2016
- Lee, H., Kwon, H., **Bency, A. J.**, & Nothwang, W., Fast Object Localization Using a CNN Feature Map Based Multi-Scale Search, CoRR abs/1604.03517
- **Bency, A. J.**, Rallapalli, S., Ganti, R. K., Srivatsa, M., & Manjunath, B. S., Beyond Spatial Auto-Regressive Models: Predicting Housing Prices with Satellite Imagery, CoRR abs/1610.04805, *Winter Conference on Applications of Computer Vision*, 2017
- Torres, C., **Bency, A. J.**, Fried, J. C., & Manjunath, B. S., RAM: Role Representation and Identification from combined Appearance and Activity Maps, *International Conference on Distributed Smart Cameras, Session on Target Tracking and Person Re-Identification*, 2017 (to appear)