

Sudipta Paul

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RESEARCH INTEREST

Computer Vision, Machine Learning, Deep Learning, Multi-modal Learning, Activity Analysis

- My research interest is mainly focused on learning from multimodal data specifically from video and text and learning association between different modalities. Along with these lines, I focus on activity analysis of video, active learning from noisy data and learning from limited supervision.

EDUCATION

University of California, Riverside, CA, USA Sept. 2017 – Present

Ph.D. in Electrical and Computer Engineering

Advisor: Dr. Amit K. Roy-Chowdhury

Bangladesh University of Engineering and Technology, Dhaka, Bangladesh 2011 – 2016

B.Sc. in Electrical and Electronic Engineering

Advisor: Dr. SM Mahbubur Rahman

RESEARCH EXPERIENCE

Research intern June 2019 – Sep. 2019

Mayachitra, Inc., Santa Barbara, CA, USA

Mentor: Dr. Shivkumar Chandrasekaran, Dr. Carlos Torres

- Pairwise activity analysis

Graduate Student Researcher Sept. 2017 – Present

Video Computing Group, UC Riverside, CA, USA

Advisor: Dr. Amit K. Roy-Chowdhury

- Multimodal learning, robustness in active learning

Undergraduate Student Researcher Feb. 2015 – March 2016

Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

Advisor: Dr. SM Mahbubur Rahman

- Affective computing

TEACHING EXPERIENCE

Lecturer June 2016 – Aug 2017

Electrical and Electronic Engineering

Daffodil International University, Dhaka, Bangladesh

PUBLICATIONS

- **Sudipta Paul**, Niluthpol Chowdhury Mithun, Amit K Roy-Chowdhury, "Text-based Localization of moments in a Video Corpus", Under review in *IEEE Transactions on Image Processing (T-IP)*
- **Sudipta Paul**, Shivkumar Chandrasekaran, B.S. Manjunath, Amit K Roy-Chowdhury, "Exploiting Context for Robustness to Label Noise in Active Learning", Under review in *IEEE Transactions on Image Processing (T-IP)*
- Shasha Li, Shitong Zhu, **Sudipta Paul**, Amit Roy-Chowdhury, Chengyu Song, Srikanth Krishnamurthy, Ananthram Swami, Kevin S Chan, "Connecting the Dots: Detecting Adversarial Perturbations Using Context Inconsistency", *European Conference on Computer Vision (ECCV)*, 2020
- **Sudipta Paul**, Carlos Torres, Shivkumar Chandrasekaran, Amit K Roy-Chowdhury, Complex Pairwise Activity Analysis Via Instance Level Evolution Reasoning, *ICASSP* 2020
- **Sudipta Paul**, Nurani Saoda, SM Mahbubur Rahman, Dimitrios Hatzinakos, "Mutual information-based selection of audiovisual affective features to predict instantaneous emotional state", *19th International Conference on Computer and Information Technology (ICCIT)*, Dhaka, 2016

HONORS & AWARDS

- **Best Paper Award**, *ICCIT*, Dhaka, 2016
- **Dean's Distinguished Fellowship**, University of California, Riverside
- **Best Project Award**, Tensilica Xtensa Embedded DSP Design Contest, India 2016
- **Merit Scholarship**, Dept. of Electrical and Electronic Engineering, BUET

TECHNICAL SKILL

- **Programming Skills:** Python, MATLAB, C
- **Deep Learning Libraries:** TensorFlow, PyTorch
- **Others:** LaTeX, MS Office, OpenCV, CVAT, Docker, Singularity, Verilog HDL

GRADUATE COURSES

- Advanced Computer Vision
- Pattern Recognition
- Intermediate Data Structures and Algorithms
- Stochastic Processes
- State and Parameter Estimation Theory
- Convex Optimization
- Math Methods for EE
- Data Mining Techniques
- Information Theory