Subhankar Sen

subhankarsen2001@gmail.com (+91) 9836987095 Kolkata, India Personal Website Linkedin
ResearchGate GScholar

EDUCATION

B.Tech in Computer Science and Engineering, Manipal University Jaipur
2019 – present | Jaipur, India
Current CGPA (upto 6th semester) - 8.83/10.00

ACCEPTED PUBLICATIONS OF PROJECTS

Choquet Integral and Coalition Game-based Ensemble of Deep Learning Models for COVID-19 Screening from Chest X-ray Images
Published at *IEEE Journal for Biomedical and Health Informatics* (impact factor- 5.772) **[Paper]** **[Source Code]** **[Visual Abstract]**

A Two-tier Feature Selection Method using Coalition Game and Nystrom Sampling for Screening COVID-19 from Chest X-Ray Images
22 Sep 2021
Published at *Journal of Ambient Intelligence and Humanized Computing, Springer* (*Impact factor*: 7.104) **[Paper]** **[Source Code]**

Fuzzy Ensemble of Deep Learning Models using Coalition Game and Information Theory for Breast Cancer Histology Classification
17 Nov 2021
Published at *Expert Systems and Application, Elsevier* (*Impact factor*: 6.954) **[Paper]** **[Source Code]**

OTHER RELEVANT PROJECTS

Spatio-temporal geometric feature extraction and CNN-based classification for 3D human skeleton action recognition

- Designed 6 novel Spatio-temporal feature extraction techniques for the generation of salient representations from raw skeleton sequences. These features were then converted into RGB image encodings, which were fed into deep CNN classifiers.
- Implemented a Dempster Shafer theory-based lambda fuzzy ensemble for aggregation of the decision scores generated by deep CNN classifiers.
- **Currently, the paper is under review at IEEE Transactions on Circuits and Systems for Video Technology**

CO-CURRICULAR ACTIVITIES

- Head of Research and former ML mentor at Randomize MUJ
- Senior Technical Coordinator and core team member at IEEE Computer Society MUJ

TECHNICAL SKILLS AND INTERESTS

Programming (Python, C, MATLAB, Java, Shell Scripting, LaTeX, HTML, CSS)

Frameworks (Pytorch, Tensorflow, OpenCV, Scikit-learn, Django, Flask)

Research Interests (Computer Vision, Deep Learning, Machine Learning, Image and Video Processing, Multimodal Analysis)

EXPERIENCE

Summer Research Intern, National University of Singapore
Jun 2022 – present | Singapore, Singapore
Broadly, I am working in deep learning for solving scene understanding problems in surgical robotics. My work currently encompasses performing novel studies in continual learning and calibration techniques for long-tailed recognition

Summer Research Intern, CVIT lab, IIIT Hyderabad
Jun 2021 – present | Hyderabad, India

- Under a weakly supervised setting, my research objective is to develop an end-to-end deep learning architecture, called AVPAC-Net, for performing Temporal Action Localization (TAL) in untrimmed videos; Here, I employed Perceiver IO (an efficient alternative to Visual Transformer with linear time complexity) for audio-visual fusion and a multi-stage attention framework for efficient modeling and suppression of action-context and background classes.
- Recently, my work focussed on a novel reformulation of the TAL problem. The idea is to use existing/modified Action segmentation schemes to solve the TAL task by effectively reformulating it as an Action segmentation problem, without the need for complicated 2-stage proposal generation schemes or proposal refinement networks.

Research Guide: Prof. Dr. Ravi Kiran Sarvadevabhatla and Prof. Dr. Makarand Tapaswi

CMATER lab, Jadavpur University Kolkata

Undergraduate Research Assistant
Oct 2020 – Jan 2022 | Kolkata, India
To date, as an RA, I have developed research applications in the field of COVID-19 detection and human-centered computer vision.
Research Guide: Professor Dr. Ram Sarkar

Research Intern
Jul 2020 – Oct 2020 | Kolkata, India
Research Topic: Breast cancer screening using novel deep learning and ensemble learning methods.
Research Guide: Professor Dr. Ram Sarkar