Soumen Basu

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Research Interests	Computer Vision, Deep Learning, Medical Image Analysis
Education	Ph.D., Department of Computer Science and Engineering, Indian Institute of Technology, Delhi, India Advisor: Prof. Chetan Arora July 2019 – Current
Publications (Journal and Core A* conferences)	1. **S. Basu**, M. Gupta, P. Rana, P. Gupta and C. Arora. "*Surpassing the Human Accuracy: Detecting Gallbladder Cancer from USG Images with Curriculum Learning*". IEEE/CVF **CVPR 2022**. 2. **S. Basu**, S. Singla, M. Gupta, P. Rana, P. Gupta and C. Arora. "*Unsupervised Contrastive Learning of Image Representations from Ultrasound Videos with Hard Negative Mining*". **MICCAI 2022**. 3. **S. Basu**, M. Gupta, P. Rana, P. Gupta and C. Arora. "*RadFormer: Transformers with Global-Local Attention for Interpretable and Accurate Gallbladder Cancer Detection*". **Elsevier Medical Image Analysis** (Impact Factor: 13.828).
Work Experience	• *Doctoral Researcher*, and Prime Minister's Research Fellow (Government of India) Department of Computer Science and Engineering, Indian Institute of Technology Delhi. July 2019 – Till Now • *Research Assistant*, Department of Computer Science and Engineering, The Pennsylvania State University, USA August 2018 – May 2019 • *Member of Technical Staff*, Adobe Systems India, Bangalore July 2015 – July 2018
Course Projects	• Automated X-Ray report generation from X-Ray images • Segmentation of Surgical Tools in Endoscopy Images • Object Detection for Anti-Poaching Aerial Patrolling of Protected Areas • Text Object Detection from Signboards • Automated digitization of hand-written forms
Services	• Program Committee Member at AAAI 2023 • Reviewer at CVPR 2023 • Reviewer at IPCAI 2023
Awards	• Recipient of MICCAI 2022 Student Travel Award • CVPR 2022 Travel Grant • Recipient of the highly prestigious Prime Minister's Research Fellowship, Government of India. • Recipient of Alumni Doctoral Grant, Department of Computer Science, IIT Delhi • Winner (2nd position) in ICVGIP 2020 Object Detection Challenge
Skills	• Python, PyTorch, OpenCV, Keras, Scikit-learn • Computer Vision, Deep Learning, Git, Bash, Flask, Latex