SHUVENDU ROY
PhD Student

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I'm a Ph.D Student at Ambient Intelligence and Interactive Machines Laboratory (Aiim Lab) and Ingenuity Labs Research Institute, Queen's University, Kingston, ON, Canada. My research focuses on Computer Vision and Deep Learning with special interest on Unsupervised learning (e.g. Self-supervised learning, and Semi-supervised learning). A summary of my profile is as follows: Published in top tier conference and journals, Skilled in python and different machine learning libraries (Pytorch, Tensorflow, etc); Experienced in deep learning method and model designing, training and deployment.

EDUCATION

Doctor of Philosophy (PhD) in Electrical and Computer Engineering, *Queen's University, Kingston, Canada*	Sep 2020 — Present
B. Sc. in Computer Science and Engineering, *Khulna University of Engineering Technology, Bangladesh*	Apr 2015 — Jan 2019

PROFESSIONAL EXPERIENCE

Graduate Research Assistant — **Sep 2020 — Present**
Queen's University — *Kinston, ON, Canada*

- Research Topic: Computer Vision, Unsupervised learning, Self-supervised
- Working on self-supervsied learning for video recognition
- Using self-supervised learing for robust affective computing

Teaching Assistant — **Jan 2022 — Present**
Queen's University — *Kinston, ON, Canada*

- Teaching assistant for ELEC 472 (Artificial Intelligence), Winter 2022.

Applied ML Researcher — **Nov 2019 –– Jul 2021**
Robi Axiata Limited — *Dhaka, Bangladesh*

- Created a users recommender system for telecom packages.
- Worked on prective models for custom churn prediction, and usage drop predction.

Jr. Software Engineer, ML — **Mar 2019 — Oct 2019**
REVE System Ltd. — *Dhaka, Bangladesh*

- Worked on Bangla spell and grammar checker and corrector.
- Built domain specific ChatBot.

SKILLS

Libraries and Technologies	PyTorch, Tensorflow, Theano, Keras, Scikit-learn, NLTK, Matplotlib, Pandas, Matlab, Git, UNIX, Android, IOS, ASP.NET, Oracle, MySQL
Programming Language	Python, C, C++, Java, $C\#$, R, JavaScript
Communication	English, Bengali

AWARDS AND SCHOLARSHIPS

Runners Up in "System Development Project Competition", at Khulna University of Engineering Technology	**Feb, 2018**
Vocational Scholarship from Khulna University of Engineering Technology for Academic year 2014/15 and 2017/18	**2015, 2018**

ACADEMIC SERVICES

Reviwer

- International Journal of Electrical and Computer Engineering (IJECE) — Apr, 2022
- IEEE Transactions on Affective Computing — Feb, 2022
- AAAI'22 Workshop on Human-Centric Self-Supervised Learning — Jan, 2022
- International Conference on Pattern Recognition (ICPR), 2022 — Jan, 2022

PUBLICATIONS

1. *Shuvendu Roy*, Ali Etemad, '**View-Invariant Compact Contrastive Learning for Facial Expression Recognition**', AAAI'22 Workshop on Human-Centric Self-Supervised Learning, 2021.
2. *Shuvendu Roy*, Ali Etemad, ''**Spatiotemporal Contrastive Learning of Facial Expressions in Videos**', accepted by 9th International Conference on Affective Computing and Intelligent Interaction (ACII 2021)
3. *Shuvendu Roy*, Ali Etemad, ''**Self-supervised Contrastive Learning of Multi-view Facial Expressions**', accepted by 23rd ACM International Conference on Multimodal Interaction (ICMI 2021).
4. M. A. H. Akhand, *Shuvendu Roy*, N. Siddique and T. Shimamura, ' **Facial Emotion Recognition Using Transfer Learning in the Deep CNN**', Electronics 10 (9), 2021.

5. *Shuvendu Roy*, '**Applying Aging Effect on Facial Image with Multi-domain Generative Adversarial Network**', International Journal of Image, Graphics and Signal Processing(IJIGSP), Vol.11, No.12, pp. 14-22, 2019.
6. *Shuvendu Roy*, '**Island Loss for Improving the Classification of Facial Attributes with Transfer Learning on Deep Convolutional Neural Network**', International Journal of Image, Graphics and Signal Processing(IJIGSP), Vol.12, No.1, pp. 18-29, 2020.
7. Sneha Paul and *Shuvendu Roy*, '**Forecasting The Average Temperature Rise In Bangladesh: A Time Series Analysis**', Journal of Engineering Science 11(1), 2020, 83-91.
8. *Shuvendu Roy* and Md. Sakif Rahman, '**Emergency Vehicle Detection on heavy traffic road from CCTV footage using Deep Neural Network**', 2nd International Conference on Electrical, Computer and Communication Engineering(ECCE), IEEE, Cox's Bazar, Bangladesh, 7-9Feb., 2019.
9. *Shuvendu Roy*, '**Generating Anime from Real Human Image with Adversarial Training**', International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT-2019), IEEE, Dhaka, Bangladesh, 5-7 May, 2019.
10. *Shuvendu Roy*, '**Improved Bangla Language Modeling with Convolution**', International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT-2019), IEEE, Dhaka, Bangladesh, 5-7 May, 2019.
11. *Shuvendu Roy*, "Denoising Sequence-to-Sequence modeling for removing spelling mistakes", International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT-2019), IEEE, Dhaka, Bangladesh, 5-7 May, 2019.
12. *Shuvendu Roy* and Sneha Paul, '**Land-Use Detection Using Residual Convolutional Neural Network**', International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT-2019), IEEE, Dhaka, Bangladesh, 5-7 May, 2019.
13. *Shuvendu Roy*, Md. Ijaj Sayim and M. A. H. Akhand '**Pathological Voice Classification Using Deep Learning**', International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT-2019), IEEE, Dhaka, Bangladesh, 5-7 May, 2019.
14. *Shuvendu Roy*, M. A. H. Akhand and N. Siddique, '**Synthesis of Facial Image using Conditional Generative Adversarial Network**', in 5th International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering, IEEE, Rajshahi, Bangladesh, July 11-12, 2019.
15. M. A. H. Akhand, Md. Ijaj Sayim, *Shuvendu Roy* and N. Siddique, '**Human Age Prediction from Facial Image using Transfer Learning in Deep Convulutional Neural Network**', in International Joint Conference on Computational Intelligence(IJCCI), pp.217-229, Springe, Singapore, 25-26 Oct. 2019.
16. *Shuvendu Roy* and Ferdous Bin Ali, '**Unsupervised Context-Sensitive Bengali Spelling Correction with Character N-gram**' in 22nd International Conference on Computer and Information Technology (ICCIT-2019), IEEE, Dhaka, Bangladesh, 18-20 Dec. 2019.
17. *Shuvendu Roy*, Sk. Imran Hossain, M. A. H. Akhand and N. Siddique, '**Sequence Modeling for Intelligent Typing Assistant with Bangla and English Keyboard**', International Conference on Innovation in Engineering and Technology(ICIET), IEEE, Dhaka, Bangladesh, 27-28 Dec., 2018.