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SHAFKAT KHAN SIAM

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RESEARCH INTEREST

Deep Neural Network, Self-supervised process, Image Processing, Machine Learning

EMPLOYMENT

Machine Learning Engineer

Software Development, Rokomari.com Ltd

March 2024 - Present

- Developed Recommendation Engine for the e-commerce site Rokomari.com.
- Created data cleaning and processing pipeline for personalized recommendation.
- Creating advertisement panel to serve targeted advertisement to relevant users.

Graduate Research Assistant

Computer Vision Lab, Chosun University

April 2021 - February 2023

- Developed and implemented advanced face detection and recognition algorithms for various projects.
- Designed and developed code for self-supervised image denoising techniques.
- Created neural network models for image-to-image conversion.
- Troubleshooting and refining recent work on segmentation-based deep learning methods and results for different methods for the co-authored papers.

Project Engineer

Robi Axiata Ltd.

October 2020 - November 2020

- Enhanced network performance by increasing the allocated bandwidth for base transceivers.
- Adhering to regulations while creating or removing beam formations through zonal controllers.

System Engineer

Grameenphone Ltd.

July 2019 - June 2020

- Conducted 24/7 alarm surveillance of network elements and systems.
- Escalated, following up, and reporting alarms until resolved.
- Performed stability checks based on system benchmark KPIs.
- Provided terminal-based support during planned activity execution in the network and ensuring successful completion.
- Enhanced the experience for content providers.

EDUCATION

Gwangju, South Korea

Chosun University

March 2021 - February 2023

- **M.Sc.** in Computer Engineering (CE)
- Thesis title: Aggregated multiscale self-supervised denoising
- Thesis code: https://github.com/khan022/aggregated-multiscale-self-supervised-denoising
- Thesis Domain: Image Processing & Machine Learning
- **CGPA:** 4.06 out of 4.50 (90.2%)
- **Scholarship:** Merit order scholarship throughout 2 years' study of M.Sc.

Khulna, Bangladesh

Khulna University of Engineering & Technology (KUET)

December 2014 - March 2019

- **BSc.** in Electronics and Communication Engineering (ECE)
- Thesis title: Classification of Chest X-Ray images to detect pneumonia using Deep Residual Network
- Thesis Domain: Image Processing & Machine Learning
- **CGPA**: 3.01 out of 4.00 (64.72%)

PUBLICATIONS

Journal Articles

• Masud An Nur Fahim, Nazmus Saqib, **Shafkat Khan Siam**, Ho Yub Jung, *Rethinking Gradient Weight's Influence over Saliency Map Estimation*, MDPI, Sensors, 22 (17), 6516, 2022.

DOI: 10.3390/s22176516

Description: We have developed a novel CAM-based method for deep neural network interpretability. Our method uses a global guidance map to produce more precise and specific saliency visualizations. We evaluated our method on three datasets and outperformed nine existing methods.

Masud An Nur Fahim, Nazmus Saqib, Shafkat Khan Siam, Ho Yub Jung, Denoising Single Images by Feature Ensemble Revisited, MDPI, Sensors, 22 (18), 7080, 2022.

DOI: 10.3390/s22187080

Description: We have proposed a new architecture for image denoising that uses modular concatenation instead of deep cascades. Our method preserves spatial fidelity and avoids cartoon-like smoothing. Our method has fewer parameters than most existing methods and achieves better performance on three datasets.

LANGUAGES AND TECHNOLOGIES

• Programming Languages: Python, C, C++, MATLAB

• Machine Learning Tools: Tensorflow, Keras, PyTorch, scikit-learn

Framework: ArduinoSCB: Raspberry Pi

• PCB/Circuit design: Proteus

STANDARDIZED TEST SCORES

• International English Language Testing System (IELTS): 07-Oct-2023

Overall	Listening	Reading	Writing	Speaking
75	8.5	8.0	6.5	6.5

• Graduate Record Examinations (GRE): 12-0ct-2020

Quantitative Reasoning Verbal Reasoning Analytical Writing 162 147 3.5

VOLUNTEERING ACTIVITIES

- **Committee Member**, Manipulators of Electrons Club (Nov 2017 Mar 2019)
- Co-founder, Innovation and Research Association for Students (IRAS) KUET, (Jul 2018 Mar 2019)
- **Organizer:** Technival 2019 (nationwide technical fest)