NITER

Utpol Kanti Das

Computer Science and Engineering

Bio

Utpol Kanti Das, from Rangamati Sadar, Rangamati, completed his Bachelor of Science and Master of Science, both in Computer Science and Engineering disciplines, from Rangamati Science and Technology University. Because of his outstanding academic performance in 2019, Rangamati Science and Technology University awarded him the Personal Academic Improvement Certificates Award-2019.

Now Utpol is working as a lecturer in the Department of Computer Science and Engineering at the National Institute of Textile Engineering and Research (NITER), which is a constituent institute of the University of Dhaka, since January 1, 2019. He has started his teaching journey as a lecturer in the Department of Computer Science and Engineering at Port City International University, Khulshi, Chittagong.

Utpol is actively involved in academic research, and his research interests include computer vision, artificial intelligence, and natural language processing. He has more than 10 publications, including journals and conferences. One of his conference papers achieved the “Best Reviewed (Easy Chair) Award”, from the International Conference on Intelligent Computing and Optimization 2022. His M.Sc. thesis, entitled “Bengali handwritten equation solving system,” was published in a top-ranked Q1 journal “Journal of King Saud University—Computer and Information Sciences.”

Education

Degree Name	Group/Major Subject	Board/Institute	Country	Passing Year
M.Sc	CSE	Rangamati Science and Technology University	Bangladesh	2021
B.Sc	CSE	Rangamati Science and Technology University	Bangladesh	2018

Experience

Job Title	Organization	Location	From Date	To Date
Lecturer, Dept. of CSE	National Institute of Textile Engineering and Research (NITER).	Nayarhat,Savar,Dhaka	02/03/2024	Continue
Lecturer, Dept. of CSE	Port City International University	7-14, Nikunja Housing Society, South Khulshi, Chattogram, Bangladesh	03/05/2023	03/03/2024

Research Activities

Research Interest

Subject	Description	Research Interest (Goal/ Target Indicatior)
Computer Vision	Computer vision is an interdisciplinary field that enables machines to understand and grasp the visual world in a manner similar to human perception. Computer Vision, which uses artificial intelligence, machine learning, and image processing techniques, tries to enable machines to extract meaningful information from visual data such as photographs and videos. This field has a wide range of applications, including driverless vehicles, medical image analysis, facial recognition, and augmented reality.	**Research Goals:** This Field aims to: • Advance State-of-the-Art Algorithms • Address Ethical Considerations • Bridge the Gap between Computer Vision and Human Perception **Target Indicators:** This field focuses on the following target indicators: • Publication in High-Impact Journals and Conferences • Integration of Research into Practical Applications. • Contribution to Open-Source Initiatives • Participation in Ethical AI Discussions
Natural Language Processing (NLP)	Natural Language Processing (NLP) is an area of artificial intelligence that aims to help computers understand, interpret, and generate human language. It includes a variety of activities like as language translation, sentiment analysis,	**Research Goals:** • Advance NLP Algorithms • Contextual

	text summarization, and question-and-answer systems. NLP is vital in bridging the gap between human communication and machine understanding, with applications ranging from virtual assistants and chatbots to information retrieval and language modeling.	Understanding • Multilingual NLP **Target Indicators:** This field focuses on the following target indicators: • Publication in Top-Tier NLP Conferences and Journals • Benchmark Performance Improvements. • Real-World Application Integration • Contribution to Open-Source NLP Initiatives
Artificial Intelligence (AI)	Artificial Intelligence (AI) is a field of computer science focused on creating systems capable of performing tasks that typically require human intelligence. Through machine learning and deep learning techniques, AI algorithms can analyze data, learn patterns, and make predictions autonomously. Natural language processing enables AI systems to understand and generate human language, facilitating communication and interaction with users. Computer vision allows AI to interpret and analyze visual information, enabling applications such as image recognition and object detection. AI powers autonomous vehicles, robotics, and virtual assistants, revolutionizing industries from healthcare to finance. Ethical considerations surrounding AI include issues of bias, privacy, and accountability in decision-making processes. Despite rapid advancements, AI still faces challenges such as ensuring transparency, fairness, and safety in its applications. As AI continues to evolve, its potential impact on society and the economy remains profound, shaping the future of technology and human-machine interaction.	**Research Goals:** • Enhanced Efficiency. • Problem Solving. • Decision Making. • Personalization. • Innovation. **Target Indicators:** • Accuracy. • Speed • Scalability. • Adaptability. • Ethical Compliance. • User Satisfaction. • Cost-effectiveness. • Social Impact.

Publications

Journal Article

SL. No-	Article Name	Link
1.	Bengali handwritten equation solving system.	https://www.sciencedirect.com/science/article/pii/S1319157824000867
2.	Supervised learning-based cancer detection	https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Supervised+Learning+based+Cancer+Detection&btnG=&oq=
3.	Fish Disease Detection System: A Case Study of Freshwater Fishes of Bangladesh	https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&as_vis=1&q=Fish+Disease+Detection+System%3A+A+Case+Study+of+Freshwater+Fishes+of+Bangladesh&btnG=

Conference Proceedings

SL. No-	Paper Name	Link
1.	Intelligent Face Detection and Recognition System.	https://ieeexplore.ieee.org/abstract/document/9498291
2.	Cancer Cell Segmentation Based on Unsupervised Clustering and Deep Learning.	https://link.springer.com/chapter/10.1007/978-3-030-68154-8_53
3.	Intelligent Cancer Detection System.	https://ieeexplore.ieee.org/abstract/document/9498410
4.	Improved Face Detection System.	https://link.springer.com/chapter/10.1007/978-3-030-93247-3_25
5.	Emotion, Age and Gender Recognition using SURF, BRISK, M-SVM and Modified CNN.	https://ieeexplore.ieee.org/abstract/document/9872771
6.	Content Based Email Spam Classifier as a Web Application Using Naïve Bayes Classifier.	https://link.springer.com/chapter/10.1007/978-3-031-19958-5_36
7.	A Deep Learning Approach for Detecting Bangladeshi Counterfeit Currency.	https://link.springer.com/chapter/10.1007/978-3-031-19958-5_51

Award

Award Type	Title	Year	Country	Description
Personal	Personal Academic Improvement Certificates Award-2019	2019	Bangladesh	Academic
Paper	Best Reviewed (Easy Chair) Award.	2022	Hua Hin, Thailand	• Addreses urgent problems worldwide which challenge us all

	• Leads to powerful decision-making systems and instruments • Presents OR and AI allowing for great scientific and practical values

Contact

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Institute – Faculty
Name of the Department: Computer Science and Engineering
Position: Lecturer