Abdullah As Sami

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Research Interests

Machine Learning, Deep Learning, Computer Vision, NLP

Research Experience

Bangla-BERT: Transformer-Based Efficient Model for Transfer Learning and Language Understanding (Google Scholar) August 2022
Lab: Center for intelligent computing
Publisher: IEEE Access

- Developed Bangla-BERT, a monolingual model trained on curated BanglaLM data, bridging gaps in NLP for underrepresented languages. This model redefines benchmarks, surpassing prior results across tasks; cited over 15 times.

Transfer Learning for Sentiment Analysis Using BERT-Based Supervised Fine-Tuning
Publisher: Sensors (Google Scholar) July 2022

- Enhancing Bangla sentiment analysis with BERT's context-awareness in CNN-BiLSTM surpasses classical ML. Our strategy, cited over 35 times, achieves superior classification.

ChoiceMask: Syntactic Evaluation on Transformer Outputs with Multiple Sequential Masks
Lab: Center for intelligent computing 2023 - Current
Manuscript under Preparation

- Developed a pioneering "Synthetic Evaluation" approach to analyze fairness in transformer models with multiple sequential masks. Explored diverse datasets and kernel methods, contributing insights for equitable NLP system development.

Undergrad Thesis June 2022 – May 2023

Real-Time Road Damage Detection Based on Improved YOLOv5 August 2023
Manuscript under consideration

- Utilizing YOLOv5, deep learning revolutionizes road management via efficient road damage detection. Our enhancements yield remarkable accuracy gains, even surpassing YOLOv8 with fewer parameters and computational demands.

Road Damage Detection and Classification using YOLOv7 July 2023
Publisher: Taylor & Francis (Accepted in BIM conference)

- Utilizing YOLOv7, deep learning enhances road management through advanced object detection. Trained on RDD 2022 dataset across six countries, YOLOv7 sets a new benchmark with 68.61% mAP and 66.87% F1 score.

Teaching Experience

Online Programming Teacher: (Preply) August 2021 – Current

- Accumulated over 1500 hours of teaching experience on the Preply platform, where I've honed my expertise in guiding students through Python programming, machine learning, data science, and the integration of artificial intelligence concepts.
- Specialized in delivering comprehensive lessons that enable students to grasp complex technical concepts and practical applications. My focus extends beyond theoretical understanding to ensure students can implement their knowledge effectively.
- Through global engagement, I've had the privilege of guiding students from diverse backgrounds, elevating their programming skills, and fostering a deep understanding of AI integration. This experience has enriched my ability to adapt teaching methods to various learning styles and levels of proficiency.
- My commitment to delivering exceptional education is reflected in my 50+ reviews, all of which are rated with 5 stars. These testimonials underscore the consistent quality of my teaching and the positive impact I've had on students' learning journeys.

Educational Qualification

Chittagong University of Engineering & Technology (CUET) May 2023
Bachelor of Science in Computer Science and Engineering (BSC)
CGPA: 3.11 out of 4.00 (3.4 In Last Two Years)

Research & Technical Skills

- **Expertise:** ML/DL, Computer Vision, NLP, Reinforcement Learning, Data Analysis
- **Libraries:** Keras, TensorFlow, Pandas, PyTorch, NumPy, Scikit-Learn, Matplotlib.
- **Code Artistry:** HTML, CSS, Javascript, Django, Git.
- **Languages:** Python, Java.
- **Insights:** MySQL, Tableau, Scientific Writing, Overleaf, Financial Analysis

Projects

Executed over 30 dynamic real-world projects for diverse global clients, harnessing the power of Transformers, NLP, Deep Learning, Data Analysis, Machine Learning, and Python**.**

Ongoing Project: Data-driven Insights for Maximizing Positive Outcomes

- Analyzing a complex Excel sheet with 50 variables and 5000+ simulations using statistics, machine learning, and deep learning to identify optimal combinations for a binary positive outcome. Crucial to pinpoint sweet-spot ranges of variables for maximum contribution.

Extra-Curricular Activities

Freelance Scientist (Kolabtree) May 2023 – Present
Blogger (Medium) (Medium) June 2023 – Present
Executive Member (Bangladesh Students League) 2019 – 2020

Certificates

Neural Networks and Deep Learning (Coursera)
Issued – Jan 23, 2022 **[Grade Received 92.80%],** Mastered Deep Learning principles, Neural Network architecture, Backpropagation techniques, and adept Python Programming for Deep Learning.

Google Certificate for Python (Google)
Issued- Aug 2, 2021 **[Grade Received 95.50%],** A dynamic acceleration through Python's core principles, swiftly imparting essential skills in a concise timeframe for rapid programming proficiency.

Introduction to TensorFlow for Artificial Intelligence, Machine Learning and Deep Learning (DeepLearning.AI)
Issued- Mar 14, 2022 **[Grade Received 98%],** Attained TensorFlow mastery, built neural networks, excelled in computer vision, grasped convolutions, became a Computer Vision expert, applied TensorFlow proficiently, and mastered Machine Learning.

Convolutional Neural Network (DeepLearning.AI)
Issued- July 30, 2022 **[Grade Received 96%],** Mastered Deep Learning principles, Neural Network architecture, Backpropagation techniques, and Python Programming for Deep Learning.

Convolutional Neural Networks in TensorFlow (DeepLearning.AI)
Issued- Aug 12, 2022 **[Grade Received 96.17%],** Handled real-world images, mitigated overfitting, excelled in transfer learning, and mastered TensorFlow and machine learning techniques.

References

References are available upon request.

Links

1. **Preply Profile:** Preply
2. **Google Scholar Profile:** Google Scholar
3. **LinkedIn Profile:** LinkedIn
4. **GitHub Profile:** GitHub
5. **Kolabtree Profile:** Kolabtree