Ishmam Tashdeed

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ishmamt | Ishmam Tashdeed | Google Scholar

Education

- **Islamic University of Technology** *January 2019 - May 2023*
  B.Sc. in Computer Science and Engineering Dhaka, Bangladesh
  - GPA: 3.97/4.00
  - Rank: 3^{rd} out of 96

Research Interests

Multimodal Learning, Visual Question Answering (VQA), Natural Language Processing (NLP), and Decentralized Learning.

Teaching Experience

- **Islamic University of Technology [🔗]** *August 2023 - Present*
  Lecturer Dhaka, Bangladesh
  - Linear Algebra (Winter 2024)
  - Business Analytics and Technology (Summer 2023)
  - Introduction to Programming (Winter 2023)

Industry and Research Experience

- **Aamra Networks Limited [🔗]** *October 2021 - December 2022*
  Research Intern Dhaka, Bangladesh
  - Built *AamraVision*, a video analysis tool for **Facial Recognition** and **Vehicular License Plate Recognition**. Integrated with a RESTful API and deployed in the local network. It is currently being used by the company and being sold to other businesses.
  - Built a **Conversational Agent** for partially automating the customer service process.
  - Worked on **Speech to Text** models to synthesize customer service calls.

Publications

[1] Ishmam, M. F.*, **Tashdeed, I.***, Saadat, T. A.*, Ashmafee, M. H., Kamal, D. A. R. M., Hossain, D. M. A. (2024). Visual Robustness Benchmark for Visual Question Answering (VQA). arXiv preprint arXiv:2407.03386. [PDF] [Code]

[2] R. S. M. Wahidur, **I. Tashdeed**, M. Kaur and H. -N. Lee, "Enhancing Zero-Shot Crypto Sentiment With Fine-Tuned Language Model and Prompt Engineering," in IEEE Access, vol. 12, pp. 10146-10159, 2024. [PDF]

Projects

- **VeloTrack: Vehicle Velocity Analysis System** *November 2022*
  Tools: PyTorch, OpenCV [🐙]
  - Developed a system for calculating velocity of vehicles from CCTV footage.
  - Integrated **Object Detection** (YOLOv5) and **Object Tracking** (DeepSort) models in the system for a robust solution.
  - The system logs their license plate, speed and time of capture and generates a report.
- **ML Algorithm Visualizer** *May 2022*
  Tools: ScikitLearn, Jupiter Notebook [🐙]
  - Developed a software to animate the learning process of multiple machine learning algorithms.
  - Contains visualizations of: Linear Regression, Logistic Regression, Neural Network, Linear Support Vector Machine, Non-Linear Support Vector Machine, K-means, Naive Bayes, Decision Tree e.t.c.
- **Xplore: Content Exploration Assistant** *March 2021*
  Tools: OpenCV, TensorFlow, Keras [🐙]
  - Created a recommendation system app that can suggest movies, music, and books based on the user's preferences or their mood.
  - Implemented an **Emotion Detection** model from user's face.
  - Completed a **Collaborative Recommendation Algorithm** to generate content recommendations for the users of the app.
- **Pathfinder: Pathing Algorithm Visualization** *July 2020*
  Tools: Python, Tkinter, PyGame [🐙]
  - Made a visualization software to animate how path finding algorithms work.
  - The system animates: Dijkstra's Algorithm, A* Algorithm, and Best First Search Algorithm.

Honors and Awards

- **Partial OIC Scholarship** *January 2019*
  Islamic University of Technology
  ◦ Awarded to the top 8% of the admitted students.

Skills

- **Programming Languages:** Python, C++, C, Java, Bash
- **Deep Learning Tools:** PyTorch, TensorFlow, Keras

Additional Information

Languages: English (Fluent), Bengali (Native)
Interests: 3D Modeling and Rendering