Md. Asraful Sharker Nirob

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Profile Summary

After completing my undergraduate degree in Computer Science and engineering, I have been involved in various academic and co-curricular activities. I am currently a Research Assistant at the Health and Informatics Lab of Daffodil International University (DIU). I take part in deep learning and machine learning-related projects with professors from other universities to help in the growth of research in this domain. I have published five research papers in different international peer-reviewed journals and conferences. I have also worked as a Junior Software Engineer for about a year and as a Student Associate part-time during my university years. I have good graphic design skills and developed my verbal skills while serving in different welfare societies in Bangladesh.

Research Interests

- Computer Vision
- Machine Learning
- Big Data
- Big Data
- NLP

Core Competencies

- Deep Learning
- Data Collection
- Reporting
- Team Work

Skills

- **Programming Languages:** Python, C, Java, C++, JavaScript
- **Machine Learning, Deep Learning, and Visualization Libraries:** Pandas, NumPy, Keras, TensorFlow
- **Web Development:** HTML, CSS, JavaScript, React JS
- **Editor/IDE:** VSCode, Code Blocks, Jupyter Notebook
- **Office Packages:** MS Excel, MS Word, MS PowerPoint
- **Graphics Design:** Adobe Illustrator, Adobe Photoshop
- **Languages:** English, Bengali

Experience

Undergraduate Research Assistant June 2024 – Present
Health and Informatics Lab *DIU, Bangladesh*
- Collected different kinds of datasets for model training from Bangladesh
- Data processing like segmentation, feature extraction, histogram
- Applied multiple models like EffiecentNet, ResNet, Inception, and so on
- Developed model like ADDNet-30

Junior Software Engineer - Web May. 2023 – June, 2023
Increments Inc *Uttara, Dhaka, Bangladesh*
- Worked with React.JS
- Making responsive web template with vanilla HTML, CSS, JS
- Utilized version control systems such as Git for code management and collaboration

Student Associate May 2022 – April 2023
CDC, Daffodil International University *Ashulia, Savar, Dhaka*
- Worked with the Core team of CDC
- Worked with Adobe Illustrator, PhotoShop, Spreadsheet, Docs, and so on

Education

Daffodil International University — Savar, Dhaka, Bangladesh
Bachelor of Computer Science and Engineering, CGPA: 3.70 (Scale 4.00) — *January 2020 – January 2024*

Publications & Projects

ORCID iD — *Google Scholar*

- T. Khatun,**M. A. S. Nirob**, P. Bishshash, M. Akter, and M. S. Uddin, "A Comprehensive Dragon Fruit Image Dataset for Detecting the Maturity and Quality Grading of Dragon Fruit", *Data in Brief*, p. 109936, Dec. 2023, doi: 10.1016/j.dib.2023.109936.
- P. Bishshash, **M. A. S. Nirob**, M. H. Shikder, A. H. Sarower, T. Bhuiyan, and S. R. H. Noori, "A comprehensive cotton leaf disease dataset for enhanced detection and classification", *Data in Brief*, pp. 110913–110913, Sep. 2024, doi: 10.1016/j.dib.2024.110913.
- S. R. Adapa, **M. A. S. Nirob**, S Bhatt, M Yerram, AP Nivas, "Enhancing Credit Card Fraud Detection: A Novel Approach with Random Forest and Behavioral Biometrics", *International journal for research in applied science and engineering technology*, vol. 12, no. 3, pp. 2858–2866, Mar. 2024, doi: 10.22214/ijraset.2024.59510.
- M. Assaduzzaman, O. Islam, **M. A. S. Nirob**, Md. M. H. Mim, and A. Mahmud, "A Benchmark Dataset for Analyzing Hematological Responses to Dengue Fever in Bangladesh, *Data in Brief*, pp. 111030, Oct. 2024, doi: 10.1016/j.dib.2024.111030.
- **M. A. S. Nirob**, M. Dutta, P. Bishshash, and Md Assaduzzaman, "Malnutrition Prediction among under-five children using Machine learning technique", Accepted for publication in *Taylor and Francia Book of BIM 2023*.
- P. Bishshash, **M. A. S. Nirob**, S. Sharmin, and M. Z. Hasan, "A Comprehensive Aloe Vera Image Dataset for Detecting Diseases in Agricultural Fields", Under Review at *Data in Brief*.
- **M. A. S. Nirob**, P. Bishshash, M. B. Ayan, T. Khatun, S. Sharmin, and M. Z. Hasan, "A Comprehensive Annotated Image Dataset for Deep Learning Analysis of Eggplant Leaf Diseases", Under Review at *Data in Brief*.
- **M. A. S. Nirob**, P. Bishshash, T. Khatun, S. Sharmin, M. Z. Hasan, and M. S. Uddin, "Attention-Based MultiScale Fusion for Brain Tumor Classification with Explainable AI", Submitted to 6th IEEE International Conference on Sustainable Technologies for Industry 5.0.
- A. K. M. Siam, **M. A. S. Nirob**, P. Bishshash, A. Ghosh, M. Ashikuzzaman, and M. B. Ayan, "Predicting Dengue Fever Outbreaks Using Advanced Machine Learning and Deep Learning Models", Submitted to 6th IEEE International Conference on Sustainable Technologies for Industry 5.0.

On Going Works

Develop a deep learning multi-scale fusion network model — September 2024 – Present

- Aim: To utilize a multi-scale model for the classification of eye diseases, enhancing predictive accuracy and enabling early detection.

Customized hybrid deep learning model — October 2024 – Present

- Aim: To utilize a hybrid deep learning model for the classification of cotton leaf diseases.

Co-Curricular Activities

Assistant General Secretary | *Computer And Programming Club* — January 2022 – December 2023

- Organized events such as C-Khoon and Unlock the Algorithm to engage students in competitive programming.
- Facilitated coding workshops for freshers, helping them to develop their programming skills and confidence.
- Mentored junior members by providing guidance on coding best practices and project development.

REFERENCES

- **Dr. Md Zahid Hasan**
  Assistant Professor, Daffodil International University, Dhaka, Bangladesh.
  zahid.cse@diu.edu.bd +8801672580748

- **Tania Khatun**
  Assistant Professor, Daffodil International University, Dhaka, Bangladesh.
  tania.cse@diu.edu.bd +8801685069742