Mahir Afser Pavel

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116/1 School Road, Mohakhali, Gulshan, Dhaka - 1212, Bangladesh| (WhatsApp)+880 1873742510, +880 1916779508| September 26, 2001| LinkedIn| GitHub| Portfolio

About

- Honest, reliable, and highly motivated, always eager to expand knowledge and skills.
- Committed to continuous learning and making meaningful contributions in dynamic and fast-paced environments.
- Strong interest in roles such as Lecturer, Data Scientist, Machine Learning Engineer, Natural Language Processing Engineer, and Research Assistant/Associate.
- Passionate about applying technical expertise to deliver impactful results in research, development, and teaching.

Work Experience

Research Assistant
North South University, Dhaka, Bangladesh
April 2024 - June 2024

- Played a key role in publishing the research paper *"Real-Time Fire Detection: Integrating Lightweight Deep Learning Models on Drones with Edge Computing"* in *Drones* (2024). Implemented and optimized object detection algorithms, enhancing model accuracy by 10-20% and contributing to research outcomes presented in peer-reviewed journals.

AI Engineer Intern
Razzaq Plaza, Mogbazar More, Dhaka
October 2024

- Assist in developing and implementing AI/LLM models, enhancing capabilities using RAG and fine-tuning, and optimizing prompts for various applications. Utilize Llama 3 and other open-source LLMs, while working with vector databases to manage data efficiently. Collaborate with the CTO and team to deliver high-quality solutions and contribute innovative ideas for improvements.

Education

- **Bachelor of Science in Computer Science and Engineering**
  North South University
  January 2019 - January 2024
  CGPA: 3.71 out of 4.00 (90.06% mark) with *Magna cum laude* honors
  Major in Artificial Intelligence Trail
  Relevant Coursework: Artificial Intelligence, Machine Learning, Pattern Recognition, Neural Networks, Natural Language Processing, Computer Vision, Image Processing, Robotics

Notable Projects

- **NSCLC Classification Using DL, CV, NLP** - Researched and implemented a lung cancer classification model using deep learning, computer vision, and natural language processing techniques, achieving an accuracy of over 90%. (GitHub Link)
- **Research** - Developed a cluster-based search engine to allow users to establish clusters of links and define the data they want the program to scrape. The scraped data is saved in an Elasticsearch index, allowing users to conduct effective searches. (GitHub Link)
- **Tooth Decay Identification Using YOLO Algorithm** - Developed an algorithm based on YOLO for identifying tooth decay in dental X-ray images, achieving over 90% accuracy.
- **More projects available on LinkedIn** - Visit my LinkedIn profile for more projects: LinkedIn

Certifications

- **Communication Masterclass by Tahsan Khan** (May 2023) - View Certificate
  Enhanced communication skills, including public speaking, negotiation, and effective interpersonal communication.
- **Audited DeepLearning.AI Courses** Developed comprehensive knowledge and hands-on experience in Machine Learning, Deep Learning, Natural Language Processing, Generative Adversarial Networks (GANs), and Advanced TensorFlow Techniques Specialization. Additionally, completed courses on improving the accuracy of large language model (LLM) applications, LangChain for LLM application development, and AI Python for beginners (all four courses).

Publications

- Md Fahim Shahoriar Titu, Mahir Afser Pavel, Goh Kah Ong Michael, Hisham Babar, Umama Aman, and Riasat Khan. *(2024)*. "Real-Time Fire Detection: Integrating Lightweight Deep Learning Models on Drones with Edge Computing." *Drones*, 8(9), 483.
- Mahir Afser Pavel, Rafiul Islam, Shoyeb Bin Babor, Riaz Mehadi, and Riasat Khan. *(2024)*. "Non-small cell lung cancer detection through knowledge distillation approach with teaching assistant" *PLOS ONE*, 19(11), e0306441.

Languages

- English - Fluent
- Bengali - Native

Professional Skills

Technical Skills

- **Languages:** Python, Java, C++, C, PHP, Prolog, Scheme
- **Web Development:** HTML, CSS, JavaScript, Django
- **Databases:** SQL
- **Version Control:** Git
- **Libraries/Frameworks:** Scikit-learn, TensorFlow, PyTorch, Keras, Pandas, NumPy, Matplotlib, Seaborn, NLTK, SpaCy, OpenCV, Gensim, LangChain
- **Containerization:** Docker

Software Tools

- **IDEs:** PyCharm, VS Code, Jupyter, Google Colab, Kaggle
- **Project Management:** Jira, Trello
- **Collaboration:** Slack, Microsoft Teams
- **Document Tools:** Word, Excel, PowerPoint, LaTeX

References

Available upon request.