

MD JULFIKER ALI JEWEL

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SKILLS

- Language Proficiency: C# | C++ | Java | Python
- Frameworks: PyTorch | TensorFlow | NumPy | Ruby on Rails | .NET
- Internet Technologies: HTML | CSS | Java script | PHP | UI/UX | MySQL | VBA
- Mainframe Technologies: JCL, COBOL, Natural
- Operating System: Windows | iOS | Linux
- Microsoft: Word | Excel | PowerPoint | MS Access
- Speaking Languages: English | Bengali | Hindi | Urdu

EMPLOYMENT EXPERIENCE

Software Programmer WV Dept. of Health and Human Resources (May 2024 to Present)

- Developed dynamic web applications using C# .NET, ASP.NET MVC, and SQL Server, optimizing data retrieval and performance.
- Enhanced mainframe system operations by debugging and refactoring COBOL and JCL scripts.
- Designed RESTful APIs and integrated cloud-based solutions to improve scalability and reliability.

Graduate Assistant (RA & TA) West Virginia State University (Jan. 2023 - Dec. 2024) Department of Math & Computer Science

- Conducted research on AI/ML applications, including multimodal large language models and cybersecurity defenses.
- Assisted in teaching undergraduate courses in Data Structures, Software Engineering, and Database Management.
- Developed machine learning models for flood forecasting and groundwater prediction using LSTM, BiLSTM, and GRU.

IT Assistant - Intern WV Department of Transportation (May 2023 - Aug. 2023)

- Automated crash data analysis processes using C++ and VBA, reducing manual effort by 40%.
- Provided IT support and optimized system operations for traffic engineering software.

RESEARCH EXPERIENCE

- Multi-modal Large Language Model (In progress)
- Human-Induced Risks in Critical Infrastructure Protection: Phishing Detection by Neural Networks.
- Long-term Multilevel Intelligent Flood Forecasting Model with feedback: Kanawha River Case (ML: LSTM, BiLSTM, GRU, ARIMA).
- Intelligent upper limbs Prosthetics with 1D Convolutional Neural Networks and quick training (Coral Accelerator, Python-Pytorch, GPU Ai)
- Groundwater level prediction (ML-LSTM, BiLSTM, GRU, ARIMA)

EDUCATION

- **M.S. in Computer Science, GPA: 3.82/4.00;** West Virginia State University, USA; Dec. 2024
- **B.Sc. in Computer Science and Engineering;** Daffodil International University, Bangladesh

PUBLICATIONS

- “Reinforcing a Monitoring System of a Regulated River using LSTM” (ICAI'23 and CSCE'23)- Published in [IEEE Xplore](#)
- “Intelligent Upper Limbs Prosthetics with 1D Convolutional Neural Networks and Quick Training” (BIOENG'23 and CSCE'23 conferences)- Published in [IEEE Xplore](#)
- “Defending Characteristics and Attribution Analysis for Phishing Attacks”- (Presented: CSCI'23 conferences (CSCI-RTCW)- Published in [IEEE Xplore](#)
- “A Literature Survey and Analysis of Defending Cyber Attacks Targeting IoT in Critical Infrastructure” - (Presented: CSCI'23 conferences (CSCI-RTCW)- Published in [IEEE Xplore](#)
- “Analytical Study of Cybersecurity Attacks and Defenses Characteristics” - (Presented: CSCI'23 conferences(CSCI-RTCW)- Published in [IEEE Xplore](#)
- “Advancing AI: Exploring the Potentials of Multimodal Large Language Models” - Accepted to CSCI24 - will be published by Springer Nature.

PROJECTS

- Developed a website on ‘Scuba Diving in Hawaii’- Ruby on Rails - Awarded Best SE Course Project.
- Implement and explore linear and logistic regression methods to develop ‘House Price’ predictive model- ML.
- Implement and explore classification and dimensionality reduction methods to develop and evaluate the performance of expression regression- ML.
- Develop a simple Recurrent Neural Network (RNN) model to predict Google stock prices- ML.
- Implement and explore the dimensionality reduction (feature embedding) and unsupervised methods for clustering & visualization of input samples.
- Tower of Hanoi Algorithm.
- Quick Sort Algorithm - Generate data, Sorting, Binary-search, Time efficiency.
- Designed prototypes and click-through demos - HCI
- Developed website on ‘Ship booking management’.

ACTIVITIES

- At the [CSCI'23](#) conference, presented on Critical Infrastructure in cybersecurity, covering topics such as Phishing detection, Defending attacks on IoT, & Characteristics of Attacks and Defenses.
- Presented an in-depth analysis on '*Phishing Cyber Attacks Characteristics and Attribution*' at ‘SecureWV’ conference in 2023
- Poster: Research Intelligent Upper-Limb Multifunctional Prostheses with EMG Pattern Recognition Control Method.
- Mentored undergraduate students in AI-driven prosthetic hand research, enhancing project and problem-solving skills.
- Earned badge - certification: Software AG Certified Natural Associate by [Software AG](#).
- Earned badge - certification: Artificial Intelligence Fundamentals [IBM!](#)
- Earned badge - certification: Getting Started with Enterprise Data Science by [IBM!](#)
- Earned badge - certification: IBM Security Zero Trust Principles from [IBM!](#)
- Earned badge - certification: Cybersecurity Fundamentals from [IBM!](#)
- Earned badge - certification: Threat Intelligence and Hunting by [IBM!](#)
- Volunteer [CS_for_all](#) conference (*Memphis/22*)
- *Mobile Application Development* **BASIS & BITM**
- ROTRACT CLUB Bangladesh member, volunteer, awarded.