

Md Jueal Mia

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Education

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- Florida International University, USA**, PhD in Computer Science (GPA: 4.00/4.00) Jan 2023 – Current
- **Coursework:** Artificial Intelligence, Advanced Machine Learning, Advanced Data Mining, etc.
- Jahangirnagar University, Bangladesh**, MS in Computer Science (GPA: 3.58/4.00) Jan 2015 – Dec 2016
- **Coursework:** Software Project Management and Quality Assurance, Ad-hoc Networks, Network Security, etc.
- Jahangirnagar University, Bangladesh**, BS in Computer Science (GPA: 3.51/4.00) Jan 2011 – Dec 2014
- **Coursework:** Data Structure, Linear Programming and Algorithm Analysis, Operating Systems, etc.

Experience

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- Graduate Research Assistant**, Florida International University, Miami, Florida May 2024 – Current
- Engineered secure federated learning models, improving system security while reducing communication overhead by 75%.
 - Collaborated with a team of 8 researchers to develop innovative methods for distributed ML security.
 - Published 2 peer-reviewed papers on federated learning and presented findings at international conferences and journals.
- Graduate Teaching Assistant**, Florida International University, Miami, Florida Jan 2023 – Apr 2024
- Assisted in teaching core computer science courses such as System Programming and Java Programming.
 - Mentored 10+ undergraduate students in coursework and technical projects.
- Graduate Research Assistant**, University of Nevada, Reno Aug 2022 – Dec 2022
- Developed and implemented machine learning algorithms for data analysis.
- Assistant Professor**, Daffodil International University, Dhaka, Bangladesh Feb 2022 – Jul 2022
- Led research and supervised 150+ student projects on AI, machine learning, and mobile application development.
- Lecturer (Senior Scale)**, Daffodil International University, Dhaka, Bangladesh May 2016 – Jan 2022
- Delivered lectures to 500+ students on Java programming, Python programming, and machine learning algorithms.
 - Managed academic advising and assisted students with technical research papers and projects.
- Project Developer (Android)**, Walton Group, Dhaka, Bangladesh Sep 2015 – Mar 2016
- Designed and deployed Android-based e-commerce applications.

Publications

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- Mia, Md Jueal, and Amini, M. Hadi, "A Secure Object Detection Technique for Intelligent Transportation Systems," *IEEE Open Journal of Intelligent Transportation Systems*, 2024.
- Mia, Md Jueal, and Amini, M. Hadi, "An Empirical Analysis of Secure Federated Learning for Autonomous Vehicle Applications," *Proceedings of the ASCE International Conference on Computing in Civil Engineering*, 2024.
- Salehi, Hojat Allah, Mia, Md Jueal, Pradhan, S Sandeep, Amini, M Hadi, and Shirani, Farhad, "CorBin-FL: A Differentially Private Federated Learning Mechanism using Common Randomness," *arXiv preprint arXiv:2409.13133*, 2024. PDF.

Projects

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- Security and Optimization of Distributed ML Techniques** | Python
- Developed novel methods for secure distributed machine learning techniques with differential privacy.
 - Designed optimized algorithms with homomorphic encryption, improving data security and resiliency.
 - Created a hybrid object detection model for intelligent transportation systems.
- Mobile Application Development** | Android, Java, MySQL
- ACM ICPC 2018 (DIU): Led the development of Android mobile applications to manage ACM ICPC 2018 regional contests.
 - DIU ICT Carnival 2018: Designed Android-based mobile apps for event management at DIU.

Awards and Leadership

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- Best Paper Award**, International Conference on Smart Systems: Innovations in Computing. 2022
- Teaching Award**, Best Performer in Computer Science, Daffodil International University. 2018
- Academic Award**, 4-year B.Sc. Scholarship, Jahangirnagar University. 2010-2014
- Organizing Committee Member**, IJCACI 2020, Joint Conference on Advances in Computational Intelligence. Nov 2020

Technical Skills

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- Programming Languages:** Python, R, Java, Android, PHP
- Web Development:** HTML, CSS, JavaScript, MySQL, SQLite
- Developer Tools:** PyCharm, Visual Studio, VS Code, Git, Docker, Eclipse
- Libraries:** pandas, NumPy, Matplotlib, PyTorch, TensorFlow, Scikit-learn, Keras