

Zulfikar Alom, PhD

Contact Information 20/A M.M Ali Road +880 1710 722 722
Chittagong, 4000, Bangladesh zulfikar.alom@auw.edu.bd

Research Interests Data security and privacy, Cybersecurity, Internet of Things, big data, secure distributed systems, Mobile malware, secure databases and file systems, location privacy and security, and trust management, and Bioinformatics.

Education **University of Insubria**, Varese, Italy October 2019
Doctor of Philosophy., Computer Science

- Graduated with distinction
- Advisors: Prof. Elena Ferrari and Prof. Barbara Carminati

Islamic University, Kushtia, Bangladesh

Master of Science., Information & Communication Engineering September 2016

- CGPA: 3.63/4.00
- 3rd out of 40 graduates

Bachelor of Science., Information & Communication Engineering August 2014

- CGPA: 3.59/4.00
- 2nd out of 40 graduates

Doctoral Dissertation Enhancing Data Privacy and Security Related Process Through Machine Learning

Achievements

1. Post-doctoral fellow at Canadian Institute for Cybersecurity (CIC)
University of New Brunswick, Canada December - 2019
2. Full Scholarship for Ph.D. Studies September - 2016
Department of Theoretical and Applied Science
University of Insubria, Italy
3. ICT Ministry Scholarship January - 2016
ICT Division, Government of the People's Republic of Bangladesh

Language Skills English: Fluent (CEFR B2 level, Speaking C1), Bangla: Native, Italian: Basic

Work

Experiences

- **One:**

Designation: **Assistant Professor** January 2020 - Present

Organization : Department of Computer Science
Asian University for Women (AUW),
Chittagong, Bangladesh

Responsibilities:

1. Coordinator of Computer Science
2. Conducted courses:
 - 2.1 Introduction to Computing and Programming
 - 2.2 Object Oriented Programming
 - 2.3 Artificial Intelligence
 - 2.4 Data Structure and Algorithms
 - 2.5 Database Management Systems
 - 2.6 Software Engineering
 - 2.7 Advanced Bioinformatics with Programming
3. Works as an adviser of 20 students

- **Two**

Designation: **Research Assistant** October 2016 – November 2019

Organization : STRICT SocialLab, DiSTA,
University of Insubria, Varese, Italy

Responsibilities:

1. Conduct literature reviews.
2. Collect and analyse data.
3. Provide ready access to all experimental data for the faculty researchers and/or supervisors.
4. Prepare articles, reports, and presentations.

- **Three:**

Designation: **Lecturer** January 2016 – September 2016

Organization : Department of Computer Science & Engineering,
Central University of Science & Technology (CUST),
Dhaka, Bangladesh

Responsibilities:

1. Conducted courses:
 - 1.1 Object Oriented Programming
 - 1.2 Data Structure and Algorithms
 - 1.3 Computer Networks
 - 1.4 Database Management Systems
2. Works as an adviser of 30 students
3. Checked assignments, homework, exam scripts etc.

Published Papers

1. **Zulfikar Alom**, Bikash Chandra Singh., Zeyar Aung, Mohammad Abdul Azim “*Knapsack graph-based privacy checking for smart environments*” International Journal of Computers & Security, 2021
2. **Zulfikar Alom**, Mohammad Abdul Azim, Zeyar Aung, Matloob Khushi, Josip Car, Mohammad Ali Moni “*Early Stage Detection of Heart Failure using Machine Learning Techniques*” International Conference on Big Data, IoT and Machine Learning (BIM), 2021
3. Dema Daoun, Fabiha Ibnat, **Zulfikar Alom**, Zeyar Aung, Mohammad Abdul Azim “*Reinforcement Learning: A Friendly Introduction*” International Conference on Deep Learning, Big Data and Blockchain (DEEP-BDB), 2021
4. Dipankar Kumar Mondal, Bikash Chandra Singh, Shivazi Biswas, **Zulfikar Alom**, Mohammad Abdul Azim “*SeizeMaliciousURL: A Novel Learning Approach to Detect Malicious URLs*” International Journal of Information Security and Applications, 2021
5. **Zulfikar Alom**, Barbara Carminati, Elena Ferrari, “*A Deep Learning Model for Twitter Spam Detection*” International Journal of Online Social Networks and Media (OSNEM), 2020
6. **Zulfikar Alom**, Barbara Carminati, Elena Ferrari, “*Helping Users Managing Context-based Privacy Preferences*” 2019 IEEE International Conference on Services Computing (SCC, 2019), pp. 100-107, Milan, Italy
7. **Zulfikar Alom**, Barbara Carminati, Elena Ferrari, “*Adapting Users’ Privacy Preferences in Smart Environments*” 2019 IEEE International Congress on Internet of Things (ICIOT, 2019), pp. 165-172, Milan, Italy
8. **Zulfikar Alom**, Barbara Carminati, Elena Ferrari, “*Detecting Spam Accounts on Twitter*” IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM, 2018), 1191-1198, Barcelona, Spain
9. **Zulfikar Alom**, Tapan Kumar Godder, Mohammad Nayeem Morshed, Asmaa Maali, “*Enhanced Spectrum Sensing based on Energy Detection in Cognitive Radio Network using Adaptive Threshold*” IEEE International Conference on Networking, Systems and Security (NSysS, 2017), 138-143, Dhaka, Bangladesh
10. **Zulfikar Alom**, Tapan Kumar Godder, Mohammad Nayeem Morshed, “*Performance Analysis of Routing Protocols in Mobile Ad-hoc Network (MANET)*” International Conference on Advanced Information and Communication Technology (ICAICT, 2016), Chittagong, Bangladesh
11. **Zulfikar Alom**, Tapan Kumar Godder, Mohammad Nayeem Morshed, “*A Survey of Spectrum Sensing Techniques in Cognitive Radio Network*” 2015 IEEE International Conference on Advances in Electrical Engineering (ICAEE, 2015), 161-164, Dhaka, Bangladesh

Papers Under Submission

1. Dema Daoun, **Zulfikar Alom**, Zeyar Aung, Mohammad Abdul Azim “*Reinforcement Learning in Blockchain-enabled IoT Networks Challenges*”, International Journal of AI Communications.
2. Nilufa Yeasmin, Nosin Ibna Mahbub, Bikash Chandra Singh, **Zulfikar Alom**, Mohammad Abdul Azim, “*Analysis and Prediction of User Sentiment on COVID-19 Pandemic using Tweets*”, International Journal of Social Network Analysis and Mining.
3. Bikash Chandra Singh, **Zulfikar Alom**, Mohammad Muntasir Rahman, Mrinal Kanti Baowal, Zeyar Aung, Mohammad Ali Moni, Mohammad Abdul Azim, “*COVID-19 Pandemic Outbreak in the Subcontinent: A data-driven analysis*”, International Journal of Personalized Medicine.
4. Antara Titikhsha Barua, Sharika Tasnim, **Zulfikar Alom**, Zeyar Aung, Mohammad Abdul Azim “*Data Mining and the Associated Social Benefits*”, International Journal of Artificial Intelligence.
5. Antara Titikhsha Barua, A.K.M. Moniruzzaman Mollah, Mohammad Abdul Azim, **Zulfikar Alom**, “*Application of Machine Learning Algorithms on Alzheimer's fMRI Dataset*”, International Conference on Electronics, Communications and Information Technology, (ICECIT) 2021
6. Fabiha Ibnat, Jigmei Gyalmo, **Zulfikar Alom**, Mohammad Abdul Azim, “*Understanding World Happiness using Machine Learning Techniques*” International Conference on Electronics, Communications and Information Technology, (ICECIT) 2021
7. Khondoker Mirazul, **Zulfikar Alom**, Mohammad Abdul Azim, Abdul Awal, “*OLGBM: Optuna Optimized Light Gradient Boosting Machine for Intrusion Detection*” International Conference on Electronics, Communications and Information Technology, (ICECIT) 2021

Publications

Google Scholar: h-index: 4, i10-index: 4, Citations: 93

<https://scholar.google.com/citations?user=nvy2H64AAAAJ&hl=en&oi=ao>

Reviewers

1. International Journal of ACM Transactions on Data Science (TDS)
2. International Journal of Social Network Analysis and Mining (SNAM)
3. International Journal of Online Social Networks and Media (OSNEM)

Technical Program Committee (TPC) Member

1. International Conference on Advanced Information and Communication Technology (ICAICT 2020)
2. International Conference on Electronics, Communications and Information Technology (ICECIT 2021)

**Online
Certifications
(Coursera.org)**

- Python for Applied Data Science License No. PSQ4G37BDHUX
- A Crash Course in Data Science License No. K4RZ4X2E2NTG
- Data Science Methodology License No. MHSSPH3K58XL
- Data Science Orientation License No. 6RVAMHF45R3C
- Databases and SQL for Data Science License No. XTR2NSZDJT9D
- Open Source tools for Data Science License No. V6DP84PH64V3
- Data Science Foundations Specialist License No. 6RVAMHF45R3C
- Blockchain Basics License No. 9SWHC3RS8KDJ
- Decentralized Applications License No. 9GGTY99QPM7Y
- Smart Contracts License No. 5S9MHDL44Q5X
- Machine Learning Foundations License No. FTNYAPK77J4S
- Introduction to Programming with MATLAB License No. B49JGZLNFQSQ

EXPERTISE	Average	Good	Very Good	Excellent
<i>Programming/Software/Design</i>				
Python				✓
R Language				✓
Tableau				✓
IBM Watson		✓		
SQL				✓
MySQL				✓
WEKA			✓	
IPython Notebook				✓
Scikit-learn				✓
Keras				✓
TensorFlow			✓	
Hadoop			✓	
Cloudera			✓	
AWS				✓
NoSQL			✓	
SparkSQL			✓	
MongoDB			✓	

**Extra-
Curricular
Activities**

- Worked as a volunteer at “**Math Olympiad 2014**” organized by the Bangladesh Mathematical Olympiad (**BdMO**)
- Student member of Institute of Electrical and Electronics Engineers (**IEEE**)
- Member of International Association of Engineers (**IAENG**)

**Personal
Information**

Date of Birth : 15 September 1990
Nationality : Bangladeshi
Marital Status : Married

References

Elena Ferrari
Full Professor
Department of Theoretical and Applied Sciences,
University of Insubria, Varese, Italy E-mail: elena.ferrari@uninsubria.it

Barbara Carminati
Full Professor
Department of Theoretical and Applied Sciences,
University of Insubria, Varese, Italy E-mail: barbara.carminati@uninsubria.it