Abdullah Al **Omar**

BSc in Computer Science and Engineering

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Research Interests: Usable privacy, Security, Blockchain, Distributed systems,
Federated Learning

Education

University of Alberta
Alberta, Canada

MASTER OF SCIENCE [THES.] IN COMPUTING SCIENCE
September 2022- August 2024 [expected]

- Graduate Assistant from September 2022
- **Intern at HCLTech from September 2023**
- CGPA- 3.70/4.0
- **Graduate Recruitment Scholarship recipient**

University of Asia Pacific
Dhaka, Bangladesh

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING
2012-2016

- CGPA: 3.96/4.0 [Last four semesters CGPA- 3.985]
- **Thesis Title:** Adaptive Secured Multicast Key Management with Re-Keying Process
- Published in the 4th IEEE Conference on Systems, Process and Control (ICSPC 2016), Melaka, Malaysia
- **Distinction:** Vice Chancellor's **Gold Medalist** and 1st among 54 students

Experience

University of Asia Pacific
Dhaka, Bangladesh

LECTURER (ON LEAVE)
Apr 2017 - July 2022 [5 years+]

- Course Conducted: Algorithms, Algorithms Lab, Software Engineering, Peripheral and Interfacing, Peripheral and Interfacing Lab, Operating Systems, Data Structure Lab
- Mentoring the Math Club

Leveraging ICT(LICT), ICT Division, Government of Bangladesh
Dhaka, Bangladesh

BLOCKCHAIN TRAINER
Jun 2020 - Sep 2020 [4 months]

- Blockchain Trainer for the top 15 teams of Bangladesh Blockchain Olympiad-2020

University of Asia Pacific
Dhaka, Bangladesh

TEACHING ASSISTANT
Nov 2016 - Apr 2017[6 months]

- Course Conducted: Computer Programming and Methodology Lab, Computer Programming lab I

Research Publications

Google Scholar Citations: 1000+ till March 2024

Peer Reviewed Journal

TOTAL 04

- J4. **IEEE Access 2021**- **Abdullah Al Omar**, Abu Kaisar Jamil, Amith Khandakar, Abdur Razzak Uzzal, Rabeya Bosri, et.al "A Transparent and Privacy-preserving Healthcare Platform with Novel Smart Contract for Smart Cities", IEEE Access 9 (2021): 90738-90749

- J3. **IEEE TNSE 2020**- Rabeya Bosri, Md. Shariar Rahman, Md Zakirul Alam Bhuiyan, **Abdullah Al Omar*** "Integrating Blockchain with Artificial Intelligence for Privacy-Preserving in Recommender Systems", IEEE Transactions on Network Science and Engineering (2020)

- J2. **IEEE TEMS 2020** - Mohammad Shahriar Rahman, **Abdullah Al Omar**, Md Zakirul Alam Bhuiyan, Anirban Basu, Shinsaku Kiyomoto, Guojon Wang. "Accountable cross-border Data Sharing Using Blockchain under Relaxed Trust Assumption" IEEE Transactions on Engineering Management (2020)

- J1. **FGCS 2019**- **Abdullah Al Omar**, Md Zakirul Alam Bhuiyan, Anirban Basu, Shinsaku Kiyomoto, and Mohammad Shahriar Rahman. "Privacy-friendly platform for healthcare data in cloud based on blockchain environment." Future Generation Computer Systems (2019).

Conference/Workshop

TOTAL 12

- C12. Hanif Bhuiya, MD Abdul Karim, Jinat Ara, **Abdullah Al Omar**, Saharul Islam, Faria Benta Karim, and Guido Governatori. "Matrib leaf classification using Deep Neural Network: An Integrated Image Processing Technique." In 2022 IEEE Region 10 Symposium (TENSYMP), pp. 1-6. IEEE, 2022.**(TENSYMP 2022)**

- C11. Paul, Sourav, SM Rafi Alam, Md Orun Sunny, Shaila Rahman, and **Abdullah Al Omar**. "Image Analysis using Deep Learning for a Smart Traffic Control System." In Proceedings of the 2nd International Conference on Computing Advancements, pp. 126-132. 2022. **(ICCA 2022)**

- C10. Wahid Sadique Koly, Abu Kaisar Jamil, Mohammad Shahriar Rahman, Hanif Bhuiyan, Md Zakirul Alam Bhuiyan, and **Abdullah Al Omar***. "Towards a Location-Aware Blockchain-Based Solution to Distinguish Fake News in Social Media." In Inernational Conference on Ubiquitous Security, pp. 116-130. Springer, Singapore, 2021.**(UbiSec 2021)**

- C9. **Abdullah Al Omar*** Abu Kaisar Jamil, Md Shakhawath Hossain Nur, Md Mahamudul Hasan, Rabeya Bosri, Md Zakirul Alam Bhuiyan, and Mohammad Shahriar Rahman. "Towards A Transparent and Privacy-preserving Healthcare Platform with Blockchain for Smart Cities." In 2020 IEEE 19th International Conference on Trust, Security and Privacy in Computing and Communications, pp. 1291-1296. IEEE, 2020. **(TrustCom 2020)**

- C8. Rabeya Bosri, Abdur Razzak Uzzal, **Abdullah Al Omar***, Md Zakirul Alam Bhuiyan, Mohammad Shahriar Rahman. "HIDEchain: A User Centric Secure Edge Computing Architecture for Healthcare IoT Devices." In 2020 IEEE International Conference on Computer Communications WKSHPS (**INFOCOM 2020**)

- C7. Jinat Ara, Md Toufique Hasan, **Abdullah Al Omar**, Hanif Bhuiyan. "Understanding Customer Sentiment: Lexical Analysis of Restaurant Reviews" 2020 IEEE Region 10 Symposium **(TENSYMP 2020)**

- C6. Rabeya Bosri, Abdur Razzak Uzzal, **Abdullah Al Omar***, A S M Touhidul Hasan, Md Zakirul Alam Bhuiyan. "Towards a Privacy-Preserving Voting System Through Blockchain Technologies." In 2019 IEEE Intl Conf on Dependable, Autonomic and Secure Computing (DASC), pp. 602-608. IEEE, 2019. **(DASC 2019)**

- C5. Md. Shahin Uddin Talukder, Nabil Islam, Shaila Sharmin, **Abdullah Al Omar***, Sakib Hasan. "Bringing a Change in Digital Mobile Banking through Distributed Technology" In the International Joint Conference on Computational Intelligence **(IJCCI 2019)**

- C4. **Abdullah Al Omar***, Rabeya Bosri, Mohammad Shahriar Rahman, Nasima Begum, Md Zakirul Alam Bhuiyan. "Towards Privacy-preserving Recommender System with Blockchains." In International Conference on Dependability in Sensor, Cloud, and Big Data Systems and Applications, pp. 106-118. Springer, Singapore, 2019. **(DependSys 2019)**

- C3. Maisha Afrida Tasnim, **Abdullah Al Omar***, Mohammad Shahriar Rahman, and Md Zakirul Alam Bhuiyan. "CRAB: Blockchain Based Criminal Record Management System." In International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage, pp. 294-303. Springer, Cham, 2018. **(SpaCCS 2018)**

- C2. **Abdullah Al Omar***, Mohammad Shahriar Rahman, Anirban Basu, and Shinsaku Kiyomoto. "MediBchain: A Blockchain Based Privacy Preserving Platform for Healthcare Data." In International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage, pp. 534-543. Springer, Cham, 2017. (**SpaCCS 2017**)

- C1. Jahir Ibna Rafiq, **Abdullah Al Omar**, Animesh Chakraborty, and Albub Yusuf. "Adaptive secured multicast key management with re-keying process." In IEEE Conference on Systems, Process and Control, pp. 181-185. IEEE. (**ICSPC 2016**)

Peer Reviewed Book Chapter

TOTAL 01

- B1. Joy, Sk Yeasin Kabir, Md Nafees Imtiaz Ahsan, Nuzhat Tabassum Progga, Aloke Kumar Saha, Mohammad Shahriar Rahman, and **Abdullah Al Omar***. "An Anti-Counterfeiting Architecture Ensuring Authenticity and Traceability for Expensive Medicines Using QR Codes." In Blockchain Technology for IoE, pp. 211-238. CRC Press, 2023.

Skills

Languages	C++, Java, Solidity, Python
Database	MySQL
Hardware	Arduino, Raspberry Pi, Proteus
Others	Ethereum Wallet, Distributed APP, System Designer, Database designer, Android Developer

English Language Proficiency

IELTS (Dec-2021)   L: 7.5, S:7, R:6, W:7

Academic Honors

2018	**Gold Medalist**, Vice Chancellor's List in 8th convocation of University of Asia Pacific	*Dhaka, Bangladesh*
2013-2018	**Vice Chancellor's Award for 7 semesters**, University of Asia Pacific	*Dhaka, Bangladesh*
2014	**Dean's Award**, Unviersity of Asia Pacific	*Dhaka, Bangladesh*

Program Organization

2021	**Organizing Member**, International Blockchain Olympiad- IBCOL	*Dhaka, Bangladesh*
2021	**Juror, Mentor, and Organizing member**, Blockchain Olympiad Bangladesh- BCOLBD	*Dhaka, Bangladesh*
2020	**Juror, Mentor, and Organizing member**, Blockchain Olympiad Bangladesh- BCOLBD	*Dhaka, Bangladesh*
2017	**Organizing Member**, 20th International Conference on Computer and Information Technology	*Dhaka, Bangladesh*
2017	**Organizing Member**, International Collegiate Programming Contest	*Dhaka, Bangladesh*
2016	**Organizing Member**, International Collegiate Programming Contest	*Dhaka, Bangladesh*

International Presentation/Talks

Blockchain Olympiad Bangladesh *Dhaka, Bangladesh*

KEYNOTE SPEAKER *TBH.- 24th July, 2024*

- Presentation on "Towards A Privacy-Preserving Voting System Through Blockchain Technologies"

IEEE Intl Conf on Dependable, Autonomic and Secure Computing *Fukuoka, Japan*

PRESENTER *2019*

- Presentation on "Towards A Privacy-Preserving Voting System Through Blockchain Technologies"

In Intl Conf on Security, Privacy and Anonymity in Computation, Communication and Storage *Guangzhou, China*

PRESENTER *2017*

- Presentation on "MediBchain: A Blockchain based Privacy Preserving Platform for Healthcare Data"

Professional Services

June 2023 **Reviewer**, Blockchain: Research and Applications, Elsevier- Online ISSN: 2666-9536

Mar 2021 **Reviewer**, IEEE Transactions on Services Computing- (ISSN: 1939-1374)

Nov 2020 **Reviewer**, A manuscript on Differential Privacy, IEEE ACCESS- (ISSN: 2169-3536)

Jun 2020 **Reviewer**, Journal of Mobile Multimedia- (ISSN: 1550-4646)

May 2020 **Reviewer**, Journal of Electronic Science and Technology- Elsevier (ISSN: 1674-862X)

Jan 2020 **Reviewer**, IEEE ACCESS – (ISSN: 2169-3536)

Aug 2019 **Reviewer**, IEEE Transactions on Industrial Informatics (TII) – (ISSN: 1551-3203)

Jul 2019 **Reviewer**, IEEE Internet of Things Journal (IoTJ) – (2327-4662)

Jun 2019 **Reviewer**, IEEE Transactions on Services Computing (TSC) – (ISSN: 1939-1374)

Apr 2019 **Reviewer**, Journal of Medical Internet Research (JMIR) - (ISSN: 1438-8871)

Oct 2018 **Reviewer**, Computational and Structural Biotechnology Journal (CSBJ)- Elsevier (ISSN: 2001-0370)

May 2018 **Reviewer**, Computational and Structural Biotechnology Journal (CSBJ)- Elsevier (ISSN: 2001-0370)

Jun 2018 **Reviewer**, International Journal of Computers and Applications (TJCA) - (ISSN: 1925-7074)

References

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Associate Professor
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University of Alberta
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