

# SHAHNAWAZ AHMAD

## Contact Address:

J- 26, Abul Fazal Enclave-1, Okhla, Jamia Nagar  
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Portfolio: <https://shahnawazmecw.github.io/>

## EDUCATIONAL QUALIFICATION:

1. Pursuing Ph. D. from Jamia Millia Islamia in the field of ***Key Management Systems in a Cloud Environment***.
2. Master of Technology (M.Tech. 2013-2015) in Computer Science and Engineering with specialization in Software Engineering from AL-Falah School of Engineering and Technology (AFSET), Dhauj, Faridabad, Affiliated to Maharshi Dayanand University (MDU), Rohtak, Haryana, India, First **Division with Honours (79.90%)**.
3. Bachelor of Technology (B.Tech. 2008-2012) in Computer Science and Engineering from DNS College of Engineering and Technology, Didauli, Amroha, J.P Nagar, affiliated to Gautam Buddha Technical University formally known as UPTU, Lucknow, U.P, India, **First Division with Honours (77.54%)**.
4. Certificate Course in **Portuguese Language** (Part-Time, 2015) from Jamia Millia Islamia (A Central University), New Delhi- 110025, India.
5. Senior School Certificate (XII-2008) from Uttar Pradesh Board, Allahabad, India, **First Division with Distinction in Math (65.40%)**.
6. Secondary School Certificate (X-2006) from Uttar Pradesh Board, Allahabad, **India, First Division (70.16%)**.

## TEACHING EXPERIENCE:

1. Working as an Assistant Professor (**September 14, 2015, to till date**) in Computer Science Department, **Mewat Engineering College (WAKF)**, Palla, Nuh, Mewat, Affiliated to Maharshi Dayanand University (MDU), Rohtak, Haryana, India.
2. Lecturer (**August 2, 2012, to July 7, 2013**) Computer Engineering Department, **DNS College of Engineering and Technology**, Didauli, Amroha, J.P Nagar, affiliated to Gautam Buddha Technical University formally known as UPTU, Lucknow, U.P, India.

## CURRENT RESEARCH INTEREST

- Cloud Computing
- Software Engineering
- Key Management Services
- Recommender Systems
- Machine Learning

## SHORT-TERM/ REFRESHER COURSES/ FDP/INDUCTION/ORIENTATION:

- Completed a 4-week Induction/Orientation Programme from June 04-July 01, 2020, under the aegis of MHRD, PMMMNMTT, organized by the Teaching Learning Centre, Ramanujan College, University of Delhi.
- Participated in the first Online 2-week refresher course in Computational and Mathematical Sciences organized by the UGC-HRDC, Jamia Millia Islamia, New Delhi from 22 October to 05 November 2021.
- Participated in AICTE recognized Short Term Course on ***“Outcome Based Curriculum”*** Conducted by Curriculum Development Centre from 25.06.2018 to 29.06.2018 at **NITTTR, CHANDIGARH.**
- Completed ***“Refresher Course on Leadership and Governance in Higher Education”***, Offered by Savitribai Phule Pune University through **SWAYAM ARPIT** for Career Advancement Scheme (CAS) promotion.
- Completed ***“ICT for Science, Technology, Engineering, and Mathematics Education”***, Offered by the Indian Institute of Science Education of Research Bhopal (IISER, Bhopal) through **SWAYAM ARPIT** for Career Advancement Scheme (CAS) promotion.
- Participated in One Week Faculty Development Programme on ***“Fundamentals of Student-Centered Learning Environments and Outcome Based Education”***, Offered by Mewat Engineering College through **HAREDA** from 13<sup>th</sup> Jan 2020 to 17<sup>th</sup> Jan 2020.

## AWARD(S)/POSITION(S)/COMPETITIVE EXAM(S):

1. Got **Best Teacher Award** (Department of Computer Science Engineering) on the occasion of Capacity Building and Energy Conservation Workshop held in MEC, Nuh on Energy Conservation Day 2019.
2. Qualified for Graduate Aptitude Test-2020.
3. First position in M. Tech. Computer Science and Engineering in the class.

4. First position in B.Tech. Eight Semesters (4<sup>th</sup> Year) in Computer Science and Engineering in the class.
5. Certification for the development of the College Website in PHP.

### **MOOC COURSES-COURSERA**

Total Number of Courses Completed = 29

1. Completed “**Introduction to Search Engine Optimization**”, an Online Course authorized by the **University of California, Davis**, and offered through Coursera.
2. Completed “**Introduction to HTML 5**”, an Online Course authorized by the **University of Michigan** and offered through Coursera.
3. Completed “**Get Interactive: Practical Teaching with Technology**”, an Online Course authorized by the **University of London** and offered through Coursera.
4. Completed “**Cloud Computing Applications, Part 1, Cloud Systems and Architecture**”, an Online Course authorized by the **University of Illinois** and offered through Coursera.
5. Completed “**AWS fundamentals: Going Cloud Native**”, an Online Course authorized by **AWS** and offered through Coursera.
6. Completed “**Programming Fundamentals**”, an Online Course authorized by **Duke University** and offered through Coursera.
7. Completed “**Fundamentals of Cloud Computing**”, an Online Course offered through Udemy.
8. Completed “**How to Write a Resume (Project-Centered Course)**”, an Online Course authorized by **SUNY, The State University of New York**, and offered through Coursera.
9. Completed “**Introduction to Project Management Principles and Practices**”, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
10. Completed “**Introduction to Cyber Security**”, an Online Course authorized by **New York University Tandon School of Engineering** and offered through Coursera.
11. Completed “**Getting Started with AWS Machine Learning**”, an Online Course authorized by **Amazon Web Services** and offered through Coursera.
12. Completed “**Introduction to GIS Mapping**”, an Online Course authorized by the **University of Toronto** and offered through Coursera.
13. Completed “**Introduction to Cloud Identity**”, an Online Course authorized by **Google Cloud**

and offered through Coursera.

14. Completed **“Programming for Everybody (Getting Started with Python)”**, an Online Course authorized by the **University of Michigan** and offered through Coursera.
15. Completed **“The Arduino Platform and C Programming”**, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
16. Completed **“Introduction to Internet of things and Embedded Systems”**, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
17. Completed **“Project Management Project”**, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
18. Completed **“Cyber Attack Countermeasures”**, an Online Course authorized by **New York University Tandon School of Engineering** and offered through Coursera.
19. Completed **“Real-Time Cyber Threat Detection and Mitigation”**, an Online Course authorized by **New York University Tandon School of Engineering** and offered through Coursera.
20. Completed **“Enterprise and Infrastructure Security”**, an Online Course authorized by **New York University Tandon School of Engineering** and offered through Coursera.
21. Completed **“Introduction to Cyber Attacks”**, an Online Course authorized by **New York University Tandon School of Engineering** and offered through Coursera.
22. Completed **“Introduction to Big Data”**, an Online Course authorized by the **University of California San Diego** and offered through Coursera.
23. Completed **“Data Management in the Cloud”**, an Online Course authorized by **Arizona State University** and offered through Coursera.
24. Completed **“Managing Project Risk and Changes”**, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
25. Completed **“Initiating and Planning Projects”**, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
26. Completed **“Budgeting and Scheduling Projects”**, an Online Course authorized by the **University of California, Irvine**, and offered through Coursera.
27. Completed **“Programming Fundamentals”**, an Online Course authorized by **Duke University** and offered through Coursera.
28. Completed **“Cryptography I”**, an Online Course authorized by **Stanford University** and

offered through Coursera.

29. Completed **“Developing AI Applications on Azure”**, an Online Course authorized by LearnQuest and offered through Coursera.

## List of Publications

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### Publications in Refereed Journals

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1. **Ahmad, S., Mehfuz, S., Mebarek-Oudina, F. et al., “RSM analysis-based cloud access security broker: a systematic literature review”**, Cluster Computing 25, 3733–3763 (2022). <https://doi.org/10.1007/s10586-022-03598-z>, **SCI Indexed Journal**.
2. **Ahmad, S., Mehfuz, S. & Beg, J., “Hybrid cryptographic approach to enhance the mode of key management system in cloud environment”**, J Supercomputing (2022). <https://doi.org/10.1007/s11227-022-04964-9>, **SCI Indexed Journal**.
3. **Shabana Urooj, Sonam Lata, Shahnawaz Ahmad, Shabana Mehfu, S Kalathil, “Cryptographic Data Security for Reliable Wireless Sensor Network”**, Alexandria Engineering Journal, Volume 72, 2023, Pages 37-50, ISSN 1110-0168, <https://doi.org/10.1016/j.aej.2023.03.061> **SCI Indexed Journal, Impact Factor = 6.626**.
4. **Shahnawaz Ahmad, Shabana Mehfu, Javed Beg, “Cloud security framework and key management services collectively for implementing DLP and IRM”**, Materials Today: Proceedings, 2022, ISSN 2214-7853, **Scopus Indexed Journal**. <https://doi.org/10.1016/j.matpr.2022.03.420>.
5. **Shahnawaz Ahmad, Shabana Mehfu, Javed Beg, “Assessment on potential security threats and introducing novel data security model in cloud environment”**, Materials Today: Proceedings, 2022, ISSN 2214-7853, **Scopus Indexed Journal**. <https://doi.org/10.1016/j.matpr.2022.03.536>.
6. **Shahnawaz Ahmad, Shabana Mehfu, and Javed Beg, “A Genetic Algorithm based Key Management Approach for Enhancing Data Security in Cloud Environment”**, International Journal of Advanced Trends in Computer Science and Engineering Vol. 9, Issue 5, pp. 8943 8951, ISSN: 2278 – 3091, September 2020.
7. **Christian Emeka Okafor, Sunday Iweriolor, Okwuchukwu Innocent Ani, Shahnawaz Ahmad,**

Shabana Mehruz, Godspower Onyekachukwu Ekwueme, Okechukwu Emmanuel Chukwumanya, Sylvester Emeka Abonyi, Ignatius Echezona Ekengwu, Okechukwu Peter Chikelu, **Advances in machine learning-aided design of reinforced polymer composite and hybrid material systems**, Hybrid Advances, Volume 2,2023, 100026, ISSN 2773-207X, <https://doi.org/10.1016/j.hybadv.2023.100026>.

8. **Shahnawaz Ahmad**, Shabana Mehruz, and Imaan Shaeel, “**Convergent Encryption Enabled Secure Data Deduplication Algorithm for Cloud Environment**”, Cluster Computing, The Journal of Networks, Software Tools and Applications (*Under Review*, November 2022), **SCI Indexed Journal**.
9. **Shahnawaz Ahmad**, Shabana Mehruz, and Imaan Shaeel, “**Key Management Schemes in Cloud-Based Systems: A Systematic Survey**”, Computer Science Review, (*Under Review*, November 2022), **SCI Indexed Journal**.
10. **Shahnawaz Ahmad** and Sadiq M, “**Recommender Systems for Software Requirements Negotiation and Prioritization**”, International Journal of Computer Applications (0975-8887), Volume 117-No. 13, USA (New York), May 2015.
11. **Shahnawaz Ahmad**, Shabana Mehruz, and Javed Beg, “*A Genetic Algorithm based Key Management Approach for Enhancing Data Security in Cloud Environment*”, International Journal of Advanced Trends in Computer Science and Engineering Vol. 9, Issue 5, pp-8943-Scopus, 8951, ISSN: 2278 – 3091, September 2020.
12. **Shahnawaz Ahmad**, Nazim Ali Khan, Shabana Mehruz, “*Impact and Challenges of Coronavirus on Daily Life and Living: A Cloud Based Communication Assistant during the COVID-19Pandemic*”, International Journal for Modern Trends in Science and Technology, UGC Journal Id: 43137, Volume 6, Issue 9, PP-91-100, Septmber-2020, India.

## **Publications in International Conferences**

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1. **Shahnawaz Ahmad**, Shabana Mehruz, and Javed Beg, “**Fuzzy Cloud Access Security Broker for Requirements Negotiation and Prioritization**”, International Conference on Power Electronics, Control, and Automation (ICPECA), IEEE, ISBN 978-1-7281-3958-6, 2019, New Delhi, India, **Scopus Indexed**.

2. **Shahnawaz Ahmad**, Shabana Mehfuz, and Javed Beg, “**Enhancing Security of Cloud Platform with Cloud Access Security Broker**”, Fifth International Conference on Information and Communication Technology for Competitive Strategies (ICTCS-2020), Scopus, SpringerLink, December-2020, Jaipur, India, **Scopus Indexed**.
3. **Shahnawaz Ahmad**, Shabana Mehfuz, and Javed Beg, “**Fuzzy TOPSIS based Cloud Model to Evaluate Cloud Computing Services**”, Congress on Advances in Materials Science and Engineering (CAMSE-2020), Scopus, SpringerLink, December-2020, India, **Scopus Indexed**.
4. **Shahnawaz Ahmad**, Shabana Mehfuz, and Javed Beg, “**Securely work from home with CASB policies under COVID-19 pandemic-A Short Review**”, Ninth International Conference on System Modelling and Advancement on Research Trends (SMART-2020), IEEE, UP Section, TMU, December 2020, Moradabad UP, India, **Scopus Indexed**.
5. **Shahnawaz Ahmad**, Shabana Mehfuz, and Javed Beg, “**Enhancement of Key Management System in Cloud Environment**”, 6th International Joint Conference on Computing Sciences (ICCS-2022), **Accepted, Scopus Indexed**.
6. **Shahnawaz Ahmad**, Shabana Mehfuz, and Javed Beg, “**Service-Centric Attribute Based Block Level Two Step Encryption Scheme for Improved Cloud Security**”, International Conference on Advance computing and Ingenious Technology in Engineering Science (AIP Conference Proceeding), **Accepted, Scopus Indexed**.
7. I. Shakeel, S. Mehfuz and **S. Ahmad**, "Securing Data in Cloud: Major Threats and Recent Strategies," 2022 11th International Conference on System Modeling & Advancement in Research Trends (SMART), Moradabad, India, 2022, pp. 1602-1607, doi: 10.1109/SMART55829.2022.10047308, **Scopus Indexed**.
8. **Shahnawaz Ahmad**, Shabana Mehfuz, and Javed Beg, “**Challenges and Solutions for Cloud Robotics Management in Smart Manufacturing Environment - A Short Review**”, NCORM-2020, Souvenir, Jamia Millia Islamia, New Delhi, India.
9. **Shahnawaz Ahmad** and Sadiq M, “**Goal Oriented Mind Map Generation Method for Requirements Elicitation Process**”, IEEE International Conference on “Futuristic Trends in Computational analysis and Knowledge management,” (A-BLAZE), organized by Amity University, Greater Noida, India 2015.
10. Mohd. Sadiq, **Shahnawaz Ahmad**, and Mohd Arif, “**Intertwining of Recommender**

**Systems with GOMMG Method for Requirements Elicitation**", International Conference on Innovative Trends in Computing and Mathematics, PP. 14-19, 2015 Organized by Delhi Institute of Technology and Management, Sonapat, Haryana, India.

11. Mohd. Arif, **Shahnawaz Ahmad**, and Mohd. Sadiq, "**Line Generation Algorithm Based on Bisection Method**", International Conference on Special Functions & Applications (ICSFA-2016), Organized by Department of Applied Science & Humanities Faculty of Engineering, Jamia Millia Islamia, New Delhi-110025, India.
12. **Shahnawaz Ahmad** and Sadiq M, "**Classification of Recommender Systems**", 3<sup>rd</sup> International Conference on Emerging Trends in Computer Science and Information Technology (ICETCSIT-2015), AL-Falah University, Faridabad, Haryana India.

## **Patent Filed**

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1. South African Govt. Patent No 2022/08301, Title "**Cyber Attack Prevention System for Automotive System Based on Artificial Intelligence**", (Granted – 28<sup>th</sup> Sept. 2022).
2. Australian Govt. Patent No 2021103249, Title "**A Novel Multilevel Optimization for Task Scheduling and Load Balancing in Cloud**". (Granted – 8<sup>th</sup> Sept 2021).
3. Australian Govt. Patent No 2021102595, Title "**A New Method of data sanitization for the privacy protection of cloud data in cloud computing**". (Granted – 9<sup>th</sup> day of March 2022).
4. Indian Patent Application No. 202141020723, Title "A System for Resource Aggregation to the Cloud with Optimal Path Detection". (Published- 14th May 2021).
5. Indian Patent Application No. 2021111017841, Title "**Integrated Solar Panel as per Sun direction using AI-based programming system**". (Published- 21<sup>st</sup> May 2021).
6. Indian Patent Application No. 2021311016697, Title "**System for Control & Manage Artificial Intelligent Speaker Functionality and Operation Using Electronic Pen**". (Published- 7<sup>th</sup> May 2021).



## Book Publication

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1. Shahnawaz Ahmad, Shabana Mehruz, Javed Beg, "Cloud Computing", By GCS Publishers, 2022. ISBN: 978-93-94304-10-9.
2. Shahnawaz Ahmad, Shabana Mehruz, Javed Beg, "Cloud Computing: An Industrial Approach", Lap Lambert Academic Publishing, 2022. ISBN: 978-620-49680-0.

## Book Chapter

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1. Ahmad, S., Mehruz, S., Beg, J. (2022). Empirical Analysis of Security Enabled Quantum Computing for Cloud Environment. In: Kumar, A., Gill, S.S., Abraham, A. (eds) Quantum and Blockchain for Modern Computing Systems: Vision and Advancements. Lecture Notes on Data Engineering and Communications Technologies, vol 133. Springer, Cham. [https://doi.org/10.1007/978-3-031-04613-1\\_3](https://doi.org/10.1007/978-3-031-04613-1_3), **Scopus Indexed Book Chapter**.

## Conferences/ Workshops Attended

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1. Second International Conference on Innovative Technology for Sustainable Development (ICITSD-2022) held on January 27-28, 2022 organized by Vellore Institute of Technology, Chennai in association with the University of Technology, Sydney.
2. Futuristic Trends in Computational analysis and Knowledge management, (A-BLAZE), organized by Amity University, Greater Noida, India 2015.
3. International Conference on Innovative Trends in Computing and Mathematics, 2015 Organized by Delhi Institute of Technology and Management, Sonapat, Haryana, India.
4. 3<sup>rd</sup> International Conference on Emerging Trends in Computer Science and Information Technology (ICETCSIT-2015), AL-Falah University, Faridabad, Haryana India.
5. Attended two days' workshop on "**Artificial Intelligence**", held on 20.02.2019 to 21.02.2019, at Mewat Engineering College, Nuh, Organized by Apron Solution Private Limited, New Delhi, India.
6. IEEE, International Conference on Power Electronics, Control and Automation (ICPECA)", organized by Jamia Millia Islamia, New Delhi, India 2019.
7. Got Volunteer Certificate of International Conference on **Power Electronics, Control, and**

*Automation (ICPECA-2019)*, Nov 2019, Organized by the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi-110025, India.

8. Participated in the workshop on *“Systems and Techniques for Preventing Depletion of Ground Water Table and Energy Conservation”* Sponsored by HAREDA held on 3<sup>rd</sup> December 2019 at MEC, Nuh, Haryana.
9. Organized workshop on *“Systems and Techniques for Preventing Depletion of Ground Water Table and Energy Conservation”* Sponsored by HAREDA held on 3<sup>rd</sup> December 2019 at MEC, Nuh, Haryana.
10. Participated in the workshop on *“Ethical Hacking & Web Security”* held on April 2019 at MEC, Nuh, Haryana.
11. Shahnawaz Ahmad, Shabana Mehruz, and Javed Beg, *“Challenges and Solutions for Cloud Robotics Management in Smart Manufacturing Environment - A Short Review”*, NCORM-2020, Souvenir, Jamia Millia Islamia, New Delhi, India.

#### **PERSONAL PROFILE:**

**Father's Name:** Mohammad Salahuddin

**Date of Birth:** 13/09/1991

**Nationality:** Indian

**Permanent Address:** H. No: 33, Mohalla Hakeempura, Sahaspur, District Bijnor, Uttar Pradesh-246745, India.

I certify that the above information is correct and complete to the best of my knowledge.

Date: .....

Place: Okhla

(Shahnawaz Ahmad)