

# Muhammad Yaseen Khan · محمد یاسین خان

Curriculum Vitae

Research & Development  
Love For Data  
Pakistan

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## Educational Background

PhD (CS)	Mohammad Ali Jinnah University	2018–cont'd.	Advisors: Dr. Tafseer Ahmed and Dr. Shaukat Wasi
MS (SE)	Karachi Institute of Economics & Technology	2014–2015	Advisors: Dr. Khurram N. Junejo
BS (SE)	University of Karachi	2007–2010	Advisors: Dr. Humera Tariq and Dr. Tahseen A. Jilani

## Positions Held

Feb. 2021–Present	Principal R&D Engineer	Love For Data, Karachi, Pakistan
Jan. 2017–Feb. 2021	Senior Lecturer	DCS, FoC, Muhammad Ali Jinnah University, Karachi, Pakistan
Jan. 2019–Dec. 2019	AI/Software Developer	AskIQ, Karachi, Pakistan
Jan. 2016–Mar. 2017	Data Scientist	Cubix Co., Karachi, Pakistan
Jun. 2013–Dec. 2016	Lecturer	CoCIS, Karachi Institute of Economics & Technology, Khi, Pakistan
Feb. 2012–Jun. 2013	Software Engineer II	Mazik Global Technologies, Khi, Pakistan / Microsoft Inc., Renton, USA
Jan. 2011–Feb. 2012	Web+iOS App. Developer	Counterpoint, Karachi, Pakistan / Qurtaba LLC., Fremont, USA
Jul. 2010–Dec. 2010	Web Developer	Revolutionary Technologies, Karachi, Pakistan
Jan. 2010–Jun. 2010	Web Developr (Intern)	SprintTechSolutions, Karachi, Pakistan

## Teaching

Fall 2020	CS6420 Applied Programming; CS1210 Introduction to Computing
Summer 2020	CS6420 Applied Programming
Spring 2020	CS6420 Applied Programming; CS3310 Artificial Intelligence
Fall 2019	CS6420 Applied Programming; CS1420 Object-Oriented Programming
Summer 2019	CS1410 Computer Programming; CS3110 Software Engineering
Spring 2019	CS6420 Applied Programming; CS6610 Information Retrieval Techniques (co-taught with Dr. Shaukat Wasi); CS2510 Data Structures and Algorithms
Fall 2018	CS2510 Data Structures and Algorithms
Spring 2018	CS1410 Computer Programming
Fall 2017	CS1410 Computer Programming
Spring 2017	CS1410 Computer Programming; CS1420 Object-Oriented Programming; CS5339 Introduction to Data Science; CS5510 Advanced Research Method (co-taught with Dr. S. Wasi)
2013–2016	Courses taught to undergrad students at KIET in different semesters: Programming Fundamentals; Object-Oriented Programming; Data Structures and Algorithms; Data Mining; Software Engineering.

## Conference and Workshop Committees

1. Technical committee, 1st Mohammad Ali Jinnah University International Conference on Computing (MAJICC '21), MAJU, Karachi (2021)
2. Organising committee, 1st International Conference on Data Sciences, MAJU, Karachi (2019)
3. Trainer, 1-Day Workshop on Data Science with Python, UBIT, Karachi University (2018)
4. Trainer, Hands-on Programming with Python, MAJU, Karachi (2018)
5. Trainer, Programming with Python, Combat:18, KIET, Karachi (2018)
6. Coach, ICPC 2015 @ NUCES-FAST, Lahore (2015)
7. Faculty head, CodeJam, PAF-KIET, Karachi (2015)

8. Faculty head, Combat: The Computing Battle 2017, KIET, Karachi (2014)
9. Coach, Startup-Weekend, IBA, Karachi (2012)

## University Committees

1. Examination paper moderation committee, MAJU, Karachi (2018–present; *chair*, Spring 2020)
2. Committee on examination policy for COVID-19 pandemic, MAJU, Karachi (*chair*, Spring 2020)
3. QEC Self-Assessment Report for undergrad and grad CS and SE programmes, MAJU, Karachi (member, 2019)
4. External course review committee, KIET, Karachi (2019)
5. Graduate thesis evaluation committee, MAJU, Karachi (member, 2018–present)
6. Academic advisor, MAJU, Karachi (2017–present)
7. Final year project evaluation/exhibition committee, MAJU, Karachi (member, 2017–present)
8. Founding faculty sponsor of ACM-MAJU student chapter, MAJU, Karachi (2017–present)
9. Admission interviews committee, MAJU, Karachi (member, 2017–present)
10. Credit transfer committee, MAJU, Karachi (member, 2018–present)
11. Faculty sponsor of ACM-KIET student chapter, KIET, Karachi (2013–2015)
12. Final year project committee, KIET, (member, 2013–2016)

## Boards

1. Board of Studies, MAJU, Karachi (member, 2017–2019)

## Publications

Items are sorted chronologically in reverse order. Conference papers that later covered into book chapters or journal articles are counted once.

### Refereed Journal Articles

1. “Automated Prediction of Good Dictionary EXamples (GDEX): A Comprehensive Experiment with Distant Supervision, Machine Learning and Word Embedding-based Deep Learning Techniques”. **M. Y. Khan**, A. Qayoom, M. S. Nizami, M. S. Siddiqui, S. Wasi, and S. M. K. R. Raazi; *Complexity*, volume 11, number 11, pages 749–755, 2020. (WoS SCIE indexed /JCR-IF: **2.83**)
2. “Hindustani or Hindi vs. Urdu: A Computational Approach for the Exploration of Similarities Under Phonetic Aspects”. M. S. Nizami, T. Ahmed, and **M. Y. Khan**; *International Journal of Advanced Computer Science and Applications*, volume 11, number 11, pages 749–755, 2020. DOI: [10.14569/IJACSA.2020.0111191](https://doi.org/10.14569/IJACSA.2020.0111191), (WoS ESCI indexed).
3. “Edit Distance-based Search Approach for Retrieving Element-wise Prosody in Hindi/Urdu Poetry”. **M. Y. Khan**, M. A. Rao, S. Wasi, T. A. Minai; *Indian Journal of Science and Technology*, volume 13, number 39, pages 4189–420. , 2020. (MJL indexed). DOI: [10.17485/IJST/v13i39.1489](https://doi.org/10.17485/IJST/v13i39.1489)
4. “Exerting 2D-Space of Sentiment Lexicons with Machine Learning Techniques: A Hybrid Approach for Sentiment Analysis”. **M. Y. Khan** and K. N. Junejo; *International Journal of Advanced Computer Science and Applications*, volume 11, number 6, pages 599–608 , 2020. (WoS ESCI indexed). DOI: [10.14569/IJACSA.2020.0110672](https://doi.org/10.14569/IJACSA.2020.0110672).
5. “Sentiment Analysis of Product Reviews in the Absence of Labelled Data using Supervised Learning Approaches”. W. Muhammad, M. Mushtaq, K. N. Junejo, and **M. Y. Khan**; *Malaysian Journal of Computer Science*, volume 32, number 2, pages 118–132, 2020. (WoS SCI indexed). DOI: [10.22452/MJCS.vol33no2.3](https://doi.org/10.22452/MJCS.vol33no2.3). JCR-IF: **0.7**
6. “Depression Detection using Naïve Bayes: Text based approach”. S. M. Emad, K. Ahsan, **M. Y. Khan**, S. Ahmed, R. Ullah, K. Rizwan, and F. Shafiq; *Interciencia*, volume 44, number 11, pages 174–182, 2020. (WoS JCR-IF: SCIE indexed). JCR-IF: **0.26**.
7. “On Extraction of Event Information from Social Text Stream: An Unpretentious NLP Solution”. K. Iqbal, **M. Y. Khan**, S. Wasi, S. Mahboob, and T. Ahmed; *International Journal of Computer Science and Network Security*, volume 19, number 9, pages 121–131, 2019 (WoS ESCI indexed).
8. “A Novel Approach For Ontology-Driven Information Retrieving Chatbot For Fashion Brands”. A. Nazir, **M. Y. Khan**, T. Ahmed, S. I. Jami, and S. Wasi; *International Journal of Advanced Computer Science and Applications*, volume 10, number 9, pages 546–552, 2019. (WoS ESCI indexed). DOI: [10.14569/IJACSA.2019.0100972](https://doi.org/10.14569/IJACSA.2019.0100972).
9. “Developing Disease Classification System based on Keyword Extraction and Supervised Learning”. M. Suffian, **M. Y. Khan**, and S. Wasi; *International Journal of Advanced Computer Science and Applications*, volume 9, number 9, pages 599–605, 2018. (WoS ESCI indexed). DOI: [10.14569/IJACSA.2018.090976](https://doi.org/10.14569/IJACSA.2018.090976).

## Refereed Book Chapters

10. "Pseudo Transfer Learning by Exploiting Monolingual Corpus: An Experiment on Roman Urdu Transliteration". M. Y. Khan and T. Ahmed; in: Bajwa I., Sibalija T., Jawawi D. (eds) Intelligent Technologies and Applications. INTAP 2019. *Communications in Computer and Information Science*, vol 1198. Springer, Singapore. DOI [10.1007/978-981-15-5232-8\\_36](https://doi.org/10.1007/978-981-15-5232-8_36).
11. "Towards a Generic Approach for PoS Tag-wise Lexical Similarity of Languages". M. S. Nizami, M. Y. Khan and T. Ahmed; in: Bajwa I., Sibalija T., Jawawi D. (eds) Intelligent Technologies and Applications. INTAP 2019. *Communications in Computer and Information Science*, vol 1198. Springer, Singapore. DOI [10.1007/978-981-15-5232-8\\_42](https://doi.org/10.1007/978-981-15-5232-8_42).

## Refereed Conference Publications

12. "Classic Fairy Tales / Children Stories of the World: Corpus Organization and Text Analytics". M. Y. Khan and M. U. T. Butt; in *Proceedings of the 7th International Conference of Linguistic Association of Pakistan (ICLAP '21)*, Sargodha, Pakistan. Nov. 2021.
13. "Using Patient Descriptions of Top-20 Diseases in Text Classification for Evidence-based Medicine". Samiullah Shaikh, M. Y. Khan, and M. S. Nizami; in *Proceedings of the 1st Mohammad Ali Jinnah university International Conference on Computing (MAJICC '21)*, Karachi, Pakistan. July. 2021. DOI: [10.1109/MAJICC53071.2021.9526252](https://doi.org/10.1109/MAJICC53071.2021.9526252).
14. "Processing Fire Detection, Face Recognition, and Head Counting for an IoT-based Application in Emergency Exit". K. Badr, K. Iqbal, S. Mahboob, and M. Y. Khan; in *Proceedings of the 1st Mohammad Ali Jinnah university International Conference on Computing (MAJICC '21)*, Karachi, Pakistan. July. 2021. DOI: [10.1109/MAJICC53071.2021.9526261](https://doi.org/10.1109/MAJICC53071.2021.9526261).
15. "Sign Language Translation in Urdu/Hindi Through Microsoft Kinect". Sohail, M. Y. Khan, N. A. Siddiqui, and Kiran; in *Proceedings of the 3rd Pak-Turk Conference On Emerging Technologies*, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan. June. 2020. DOI: [10.1088/1757-899x/899/1/012016](https://doi.org/10.1088/1757-899x/899/1/012016).
16. "Urdu Sentiment Corpus (v1.0): Linguistic Exploration and Visualization of Labeled Dataset for Urdu Sentiment Analysis". M. Y. Khan and M. S. Nizami; in *Proceedings of the 2nd IEEE International Conference On Information Science & Communication Technology*, Karachi, Pakistan. Feb. 2020. DOI: [10.1109/ICISCT49550.2020.9080043](https://doi.org/10.1109/ICISCT49550.2020.9080043).
17. "Practices for Achieving Accuracy in Software Costing and Estimation". M. A. Latif, M. Y. Khan, and K. Bashir; in *Proceedings of the 2nd International Conference on Computing & Information Sciences*, Karachi Institute of Economics and Technology, Karachi, Pakistan. Nov. 2018.
18. "Drive pattern analyzer using smartphones". S. Mahboob, K. Iqbal, H. Farman, M. Y. Khan, and S. Wasi; in *Proceedings of the 13th IEEE International Conference on Emerging Technologies*, Capital University of Science and Technology, Islamabad, Pakistan. IEEE, pages 1-5, 2017. DOI: [10.1109/ICET.2017.8281659](https://doi.org/10.1109/ICET.2017.8281659).
19. "Harnessing English Sentiment Lexicons for Polarity Detection in Urdu Tweets: A Baseline Approach". M. Y. Khan, S. M. Emaduddin, and K. N. Junejo; in *Proceedings of the 11th IEEE International Conference on Semantic Computing*, San Diego, USA. IEEE, pages. 242-24, 2017. DOI: [10.1109/ICSC.2017.68](https://doi.org/10.1109/ICSC.2017.68).

## Unpublished Work

20. "Discovering Lexical Similarity Through Articulatory Feature-based Phonetic Edit Distance". T. Ahmed, M. S. Nizami, M. Y. Khan; <https://arxiv.org/abs/2008.06865>.
21. "Developing Sentiment Lexicon and Labelled Corpus for Urdu Sentiment Analysis". Muhammad Yaseen Khan, R. Zaheer; *experimentation completed; in draft*.
22. "Developing Emotion Lexicon and Labelled Corpus for Urdu Emotion Detection". Muhammad Yaseen Khan, T. Khalid; *experimentation completed; in draft*.
23. "Urdu Named-Entity Recognition System". T. Ahmed, M. Y. Khan, and S. Nizami; *experimentation completed; in draft*.
24. "LSTM-based Urdu Word Segmentation". M. Y. Khan and T. Ahmed; *experimentation completed; in draft*.
25. "Depressive Sentiment Analysis in Microblogs: A Machine Learning Approach". S. M. Emaduddin, K. Ahsan, M. Y. Khan, and S. Ahmed; *under review*.
26. "Efficient Recipe Recommendation System Using Signature-Trees". A. Sohani, M. Y. Khan, and R. Ullah; *accepted with revision*.

## Conference and Workshop Attendee

1. 7th Intl. Conf. of Linguistics of Pakistan (ICLAP), Univesity of Sargodha, Pakistan (2021)
2. 1st Mohammad Ali Jinnah Univesity Conf. on Computing (MAJICC), Karachi, Pakistan (2021)
3. 7th Intl. Conf. on Language and Technology (CLT), CLE-UET, Lahore (2020)
4. 2nd Intl. Conf. on Information Science & Communication Technology (ICISCT), UoK, Karachi, Pakistan (2020)
5. 2nd Intl. Conf. on Intelligent Technologies and Applications (INTAP), IUB, Bhahawalpur (2019)
6. 1st Intl. Conf. on Data Science, MAJU, Karachi, Pakistan (2019)
7. 2nd Intl. Conf. on Computing and Information Sciences, KIET, Karachi, Pakistan (2018)
8. HEC-NCEAC 3-Day Workshop on Data Science, Islamabad (2017)

## Graduated Students

1. M. S. Nizami (MS Thesis - CS); “Formulating Patient Descriptions to Support Evidence Based Medicine”. Spring 2018. Co-supervised by Dr S. Wasi.
2. Alvina Naveed (MS Thesis - SE); “Exploiting Bug Narrations for Predictive Analysis on Bug Severity”. Fall 2020.
3. Abdul Basit (MS Thesis - CS); “Human motion tracking for gait analysis through smart phones and machine learning approaches”. Fall 2020.
4. Abdul Qayoom Bhatti (MS Thesis - CS); “Supervised Learning-based Good Dictionary Examples Recommendation System”. Fall 2020.
5. Mirza Muhammad Muneeb Baig (MS Thesis - CS); “Sarcasm detection in Urdu Text”. Fall 2020.

## Awards and Honours

1. Awardee of Dean’s List 2014 and 2015 during MS.SE, KIET

## Research Interests

Natural Language Processing · Information Extraction · Information Retrieval · Affective Computing in Text · Lexical Analysis · Discourse Analysis · Computational Linguistics · Corpus Linguistics · Sociolinguistics · NLP for scared source Indic languages (specifically languages in Perso-Arabic scripts)

## Skills

Computing ..... Programming (Python, Java, JavaScript, C#, MySQL) · Typesetting with  $\text{\LaTeX}$   
Languages ..... English · Urdu · Hindi · Persian/Farsi

## References

1. Dr. Tafseer Ahmed Khan, Professor and Head Center for Language Computing, MAJU, Karachi.
2. Dr. Shaukat Wasi, Professor and Dean Faculty of Computing, MAJU, Karachi.
3. Dr. Asim Imdad Wagan, Professor and Dean Faculty of Engineering, MAJU, Karachi.
4. Dr. Khurum Nazir Junejo, Head of R&D at Love for Data.
5. Dr. Muhammad Khalid Khan, Professor and Director CoCIS, PAF-KIET, Karachi.