

Kyoti Khan
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RESEARCH AND TECHNICAL SKILLS

Research Interests

- Soft Computing, Image Processing, Medical image analysis, Marketing, Data Science, Analytics, Computer Vision, Neural Networks, Speech processing, Deep learning, Fuzzy logic, Machine learning, Artificial intelligence, Natural Language Processing (word2vec, RNNs, transformer neural networks, BERT, GPT), Computer-aided diagnosis, Ultrasound imaging etc.

Engineering Competences

- Computer Science: problem analysis, modelling of the solution by use of algorithms, Maths, Probability, statistics and algorithms, Neural Networks, transfer learning, convolutional neural networks, deep learning architectures, type II fuzzy set, Intuitionistic fuzzy sets, fuzzy classifiers, machine learning-based classifiers.
 - Operating Systems: Windows 10/ 7/xp.
 - Simulation Software: Matlab/ Simulink, Keil, PSpice, Microsoft Visio
 - Languages: C, Python, Java
 - Documentation Tool: Microsoft Office, and Latex
 - Others: SQL, R, Cassandra, Hadoop, Spark, Tableau, Power BI, Github, RESTful APIs, AWS Sagemaker, Excel, Kafka, Flink, Domo, Jira, Confluence.

Others

- LinkedIn profile: <https://www.linkedin.com/in/kyoti-khan2b747083/>
- GitHub profile: <https://github.com/kyotikhan>

EXPERIENCES

1. Industrial Experience

- Healthcare Researcher (Intern) at **Sony Research India Private Limited** (October 2022-present) ○ Worked on data (text, image, audio and speech signals, techniques (supervised, unsupervised, reinforcement and meta-learning).
 - Contribution from data collection to product launch.
 - Contribution to patents, publications, collaborations and providing open source research solutions
- Thesis Supervisor and Instructor at **upGrad** (Dec 2021-Present)~ Freelancer ○ Worked with more than 100 learners in guiding/mentoring their thesis and projects in collaboration with Liverpool John Moore's University, UK and IIT Madras.
- Head-Image Processing at **Bajaj Capital Limited, Gurugram** (January 2022-September 2022) ○ Worked on image and text datasets to provide personalized diet recommendation system.
 - Worked on stages from data collection to deployment of project.

2. Research Experience

- Postdoctoral Research Associate at **IIT Delhi** (August 2022-present) ○ Published 6 papers (3 journals +3 International Conferences) ○ Collaborated and shared 700+ GitHub repositories.
- Ph. D Research Scholar at **The Northcap University, Gurugram** (January 2017-December 2021) ○ **Supervisors:** Prof. Madasu Hanmandlu (IIT Delhi), Prof. Rekha Vig (NCU, Gurugram) ○ **Subject:** Image Processing
 - **Remarks:** Research work is focused on the analysis of breast cancer imaging modalities to detect Cancer. The main objective of the thesis are pre-processing (denoising, removal of background, pectoral muscles, labels etc. and enhancement), segmentation (clustering), feature extraction and classification using fuzzy, machine learning and deep learning techniques.
- Other Internship projects ○ Modelling and Simulation of Adaptive Schmitt Trigger using PSPICE Software
 - Modelling and Simulation of Circuits using Matlab Simulink for power factor correction of DC drives

3. Volunteering Experiences

- Technical reviewer of following book and international journals. Reviewed more than 150 international publications.
- **Book:** Image Processing Masterclass with Python: 50+ Solutions and Techniques.
- **International Journals:** Computers in Biology and Medicine, The computer Journal, Peer J Computer Science, Journal of Health care engineering, Asian Research Journal of Mathematics, Asian Journal of Case Reports in Surgery, Asian Journal of Case Reports in Computer Science, Concurrency and Computation: Practice and Experience, Current Journal of Applied Science and Technology, Asian Journal of Research in Computer Science, Journal of Pharmaceutical Research, International Journal of Scientific Research and Reports, Academia Letters, Journal of Advances in Mathematics and Computer Science, CAAI Transactions on Intelligence Technology, Biomedical signal Processing and Control, Applied soft computing, Journal of Electronic Imaging and others.

EDUCATIONAL QUALIFICATIONS

S.No	Degree	Passing Year	Subject	University	Marks in %age
1	PhD	2021	Biomedical Image Processing	The Northcap University, Gurugram	88.02%
2	M.Tech	2016	EECE	YMCA UST, Faridabad.	81.7%
3	B.Tech	2013	ECE	M.D.U, Rohtak	76.35%
4	12 th	2009	Non-Med	C.B.S.E	81.4%
5	10 th	2007	General	C.B.S.E	90.4%

PRIZES AND SCHOLARSHIPS

- Got University fellowship for doctoral research at The Northcap University, Gurugram (2017-2019).□
- Awarded Certificate of Excellence in Electronics & Instrumentation for securing 1st position in the College in the Examinations conducted by MDU (Rohtak) 2009 & 2010.□
- Got Scholarship under PM Scholarship Scheme (2009-2013)□
- Won second prize in creative writing at CONTRIVANCE 2K11, a National Level Techno Cultural Festival organized by Ape jay College of Engineering□

- Got Silver Medal in Junior National Mathematics Olympiad Contest in 2006□

CERTIFICATIONS ACQUIRED FROM ONLINE COURSEWORK

Earned certifications from six hundred plus Massive Open Online Courses related to data science, marketing, machine learning, deep learning, image processing, and associated courses. A few important certifications are discussed below.

- Advanced-Data Science with IBM Specialization, July 2021.
(<https://www.coursera.org/account/accomplishments/specialization/certificate/VHM53VNHJJ63>)□
- IBM AI Engineering Professional Certificate, Feb 2021
(<https://www.coursera.org/account/accomplishments/specialization/certificate/RTEHVZA85E3D>)□
- Deep Learning Specialization, Jan 2021
(<https://www.coursera.org/account/accomplishments/specialization/certificate/T6KHSXQ9X4SD>)□
- Applied Data Science Specialization, July 2020
([coursera.org/account/accomplishments/specialization/certificate/FAVSHF7ZK87A](https://www.coursera.org/account/accomplishments/specialization/certificate/FAVSHF7ZK87A))□
- AI for Medicine Specialization, June 2020
(<https://www.coursera.org/account/accomplishments/specialization/certificate/FFZ2B73K5KHS>)□
- IBM Data Science Professional Certificate, June 2020
(<https://www.coursera.org/account/accomplishments/specialization/certificate/WGP85Q8B497Z>)□
- Machine Learning Specialization, June 2020
(<https://www.coursera.org/account/accomplishments/specialization/certificate/2RJU4KVXCW63>)□
- Introduction to Data Science Specialization, June 2020
(<https://www.coursera.org/account/accomplishments/specialization/certificate/FN9JSRJAVACH>)□

PARTICIPATION IN WORKSHOP/SHORT TERM COURSES/SEMINAR

- Seminar on Artificial Intelligence and Mechatronics using MATLAB and Simulink□
- Seminar on MATLAB & Simulink for Predictive Analytics, signal Processing & Controls Application□
- Short term Course on Power Quality Monitoring and Analysis through ICT□
- Short term Course on Tools for Engineering Research through ICT□

I hereby declare that the information provided above is correct to the best of my knowledge.

Dated: March, 2023

Kyoti Khan