

Kushal Kanwar

CSE&IT, Jaypee University of Information Technology, Solan, HP 173229

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EMPLOYMENT HISTORY

- **Assistant Professor (SG)** in *Jaypee University of Information Technology, Solan* [Aug 2022 – Till Date]
Teaching: C Programming and Logic Building.
- **Assistant Professor** in *Shoolini University, Solan* [Oct 2020 – Aug 2022]
Teaching: Theory of Computation and Modelling and Simulation.
- **Consultant** in *AADDOO SofTech Pvt. Ltd.* [Oct 2020 – Aug 2022]
Role: Assistance in AI/ML model development and MCDM techniques applications.
- **Assistant Professor** in *Chandigarh University, Chandigarh* [Aug 2014–Aug 2015]
Teaching: Theory of Computation and Modelling and Simulation.
- **Lecturer** in *Baddi University, Solan* [June 2009–June 2012]
Teaching: Artificial Intelligence and Modelling and Simulation.
- **Lecturer** in *UIIT, Himachal Pradesh University, Shimla* [Aug 2008–May 2009]
Teaching: Artificial Intelligence.

EDUCATION

- **Doctor of Philosophy (Ph.D.)** [Sep 2015–Feb–2021]
CSE, UIET, Panjab University, Chandigarh, India.
- **Master of Engineering (M.E.)** [Aug 2012–Dec 2014]
CSE, UIET, Panjab University, Chandigarh, India.
CGPA in coursework: 7.94/10
- **Bachelor of technology (B.Tech.)** [Jul 2004–Jun 2008]
Information Technology, UIIT, Himachal Pradesh University, Shimla, HP, India
Aggregate: 69.34%
- **Higher Secondary Certificate (10+2)** [May 2004]
JNV Solan, CBSE
Aggregate: 65% (Best of Five)
- **Secondary School Certificate (10)** [May 2002]
JNV Solan, CBSE
Aggregate: 68.8%

TEACHING ELIGIBILITY

1. **UGC-NET** Qualified in Computer Science and Applications, Dec 2013, [April 2014]
Roll No 48870220, Marks: 224/350 (64%).
2. **GATE** 2012 Qualified, AIR 4692, Marks 44.67, Gate Score 489, Percentile 97. [March 2012]

RESEARCH INTEREST

- Artificial Intelligence
- Deep Learning

- Complex Systems
- Network Analysis

PHD STUDENTS SUPERVISING

Dhalak D. Solomon 2021-Present MULTIFACTORIAL DISEASE CLASSIFICATION USING DEEP LEARNING (**Tentative**)

M.TECH./M.SC. STUDENTS SUPERVISING

Sagar Rawat 2021-Present RECOGNITION SYSTEM FOR DYNAMIC GESTURES OF INDIAN SIGN LANGUAGE USING DEEP LEARNING

Shivani Bhardwaj 2021-Present A TECHNIQUE TO ESTABLISHING COORDINATION BETWEEN CHANGING USER PREFERENCE IN A RECOMMENDER SYSTEM

Harshit Kailash 2021-Present CUSTOMER LIFETIME VALUE ANALYSIS USING MACHINE

UNDERGRADUATE PROJECTS SUPERVISED

2022 Deep Learning Based Garbage Classification Technique

2022 Student Record Management System in C

2022 Transfer Learning Based Face Mask Detection System

RESEARCH PROFILE:

- **Google Scholar:**

<https://scholar.google.com/citations?user=AEIv6ecAAAAJ&hl=en>

- **Scopus:**

<https://www.scopus.com/authid/detail.uri?authorId=57198435815>

- **ORCID ID:**

<https://orcid.org/0000-0002-4822-7795>

- **Publons:**

<https://publons.com/wos-op/researcher/5369352/kushal-kanwar>

PUBLICATIONS IN JOURNALS

Published (3)

1. K Kanwar, H Kumar, S Kaushal, A new edge centrality measure to identify and rank critical edges in complex networks. *Social Network Analysis and Mining*, Springer, 2022.
Indexing: SCOPUS. **Impact Factor:** 3.868.
2. K Kanwar, H Kumar, S Kaushal, Complex network based comparative analysis of Delhi Metro network and its extension. *Physica A: Statistical Mechanics and its Applications*, 2019.
Indexing: SCI and SCOPUS. **Impact Factor:** 2.790.
3. K Kanwar, H Kumar, S Kaushal, A Hybrid Node Ranking Technique for Finding Influential Nodes in Complex Social Networks. *Library Hi Tech*, 2019.
Indexing: SSCI and SCOPUS. **Impact Factor:** 1.218.
4. Kushal Kanwar, Sakshi Kaushal, Harish Kumar, Gaurav Gupta, Manju Khari, BC_{DCN} : a new edge centrality measure to identify and rank critical edges pertaining to SIR diffusion in complex networks. *Social Network Analysis and Mining*, 2022.
Indexing: ESCI and SCOPUS. **Impact Factor:** 3.868.

Under Review (1)

1. K Kanwar, H Kumar, S Kaushal, An efficient method for node ranking in complex networks by hybrid neighbourhood coreness. *Computing*, Springer.
Communicated: September, 2021 . **Indexing:** SCIE and SCOPUS. [Under Review]
Impact Factor: 2.880.

PATENTS (1)

1. Ratnesh Tiwari, Prashant Singh, Smita Jaiswal, Love Kumar, Manish Kumar Sinha, Preeti Rajput, Ashish Shrivastava, Lekhpal Singh, Gaurav Gupta, **Kushal Kanwar**, Abhishek Tomar, Ramesh Chandra Panda, "A SYSTEM AND METHOD OF DRONE FOR CROP MONITORING AND SURVEILLANCE", **Publication Date:** 23-03-2022, **Patent office:** Australia (AU), **Patent number:** 2021102757.

COPYRIGHTS (1)

1. Kushal Kanwar and Sachin Sharma, "MCQEDITOR: A TEXT EDITOR FOR EASY DEVELOPMENT AND MAINTENANCE OF MCQS IN AIKEN FORMAT", **Application Date:** 25/05/2022, **Patent office:** India, **Diary number:** 10868/2022-CO/L, **Request number:** 53122.

CONFERENCE PUBLICATIONS/POSTERS (5)

1. A. Joshi, K. Kanwar, P. Vaidya, and S. Sharma, "A Principal Component Analysis, Sampling and Classifier strategies for dealing with concerns of class imbalance in datasets with a ratio greater than five" [**Accepted**]
Presented at: ICCSEA 2022, GIET University, Gunupur, India. [**ONLINE**]
Indexing: SCOPUS.
2. A. Joshi, K. Kanwar, and P. Vaidya, "Attribute Selection, Sampling and Classifier methods to address class imbalance issues on data-set having ratio less than five" [**Accepted**]
Presented at: IC4S 2021, KEC, Ghaziabad, India. [**ONLINE**]
Indexing: SCOPUS.
3. K. Kanwar, S. Kaushal, and H. Kumar, "An AHP-TOPSIS based framework for the selection of node ranking techniques in complex networks," in Machine Learning, Image Processing, Network Security and Data Sciences, (Singapore), pp. 527–542, Springer Singapore, 2020.
Presented at: MINDS 2020. NIT Silchar, Assam, India. [**ONLINE**]
Indexing: SCOPUS. [**Received Best Paper Award**]
4. K Kanwar, H Kumar, S Kaushal, A new edge centrality measure to identify and rank critical edges in complex networks. [**POSTER**]
Presented at: Conference on Complex Systems 2019, Nanyang Technological University, Singapore.
5. K Kanwar, H Kumar, and S Kaushal., A Metric to Compare Vulnerability of the Graphs of Different Sizes, *Electronic Notes in Discrete Mathematics*, 2017.
Presented at: International Conference on Graph Theory and Computation 2016, South Asian University, New Delhi, India.
Indexing: SCOPUS.

REVIEWER FOR THE JOURNALS (2)

1. **Library Hi Tech**, Emerald Group Publishing. **Indexing:** SSCI and SCOPUS.
2. **Facilities**, Emerald Group Publishing. **Indexing:** Business Source Premier and Current Abstracts.

TECHNICAL PROGRAM COMMITTEE (TPC) MEMBER

- Third International Conference on Computing, Communication, and Cyber-Security (IC4S-2021), 2021.

- Fourth International Conference on Computing, Communication, and Cyber-Security (IC4S-2022), 2022.

WORKSHOPS ATTENDED

- **Workshop on Image Processing with Deep Learning** [22 March–26 March 2022]
JUIT, Solan, Himachal Pradesh, India.
- **A Crash Course in Deep Learning** [3 July–18 July 2021]
IIT Mandi, Himachal Pradesh, India.
- **Machine Learning and Its Applications** [23 Nov–28 Nov 2020]
Lendi Institute of Engineering and Technology, Andhra Pradesh, India.
- **Recent Trends in Domination in Graphs: Algorithms, Complexity and Applications** [15 June–19 June 2020]
CSE, NIT Warangal, Telangana, India.
- **Developing Machine Learning Skills in Python** [5 March–7 March 2018]
UIET, Panjab University, Chandigarh, India.
- **Complex Networks: Structure and Nonlinear Dynamics, GIAN Course** [12 Sep–16 Sept 2016]
National Institute of Technology, Durgapur, West Bengal, India.
- **Network Science and Multi-agent Systems, GIAN Course** [30 May–10 June 2016]
Indian Institute of Technology, Indore, Madhya Pradesh, India.
- **Advanced Engineering Optimization Through Intelligent Techniques** [21 Mar–25 Mar 2016]
Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India.
- **Database Design Using SQL Programming** [4 May–8 May 2015]
Chandigarh College of Engineering and Technology, Chandigarh, India.
- **High Impact Teaching Skills** [7 Dec–8 Dec 2009]
Baddi University, Solan, Himachal Pradesh, India.

CONTRIBUTION TO ACADEMICS ACTIVITIES

- Student member of Institute Innovation Council at Panjab University for 2018 to 2020.
- Faculty Co-coordinator for B.Tech.(AI/ML) at Shoolini University.
- Faculty Co-coordinator for Hackathon at Shoolini University, 2021.
- Co-coordinator for placement Boot-camp Summer 2022 at Shoolini University.

TEACHING

- C Programming
- Data Structures
- Theory of Computation
- Python
- Modelling and Simulation
- Complex Networks
- Time Series Analysis and Forecasting

INTERNATIONAL VISITS

- **NTU, Singapore:** To Present Poster in Conference on Complex Systems 2019 at Nanyang Technological University, Singapore, from 30-Sep-2019 to 04-Oct-2019.

REFEREES

- **Prof. Harish Kumar**
CSE Deptt., UIET, Panjab University, Chandigarh, 160014, India.
Email: harishk@pu.ac.in.
- **Prof. Sakshi Kaushal**
CSE Deptt., UIET, Panjab University, Chandigarh, 160014, India.
Email: sakshi@pu.ac.in.

PERSONAL INFORMATION

Father's Name ... Mr. Yadvinder Singh Kanwar
Date of Birth ... 22-Mar-1985
Gender ... Male
Marital Status ... Married
Permanent Address ... Vill. Mukrari, PO Kunihar, Teh. Arki, Dist. Solan, HP 173207.
Languages ... Hindi and English
Hobbies ... Reading about history of Mathematics, Science and Civilizations.

DECLARATION

I hereby certify that all the information furnished above is correct to the best of my knowledge and belief.

(Kushal Kanwar)