## Dr. Harpreet Kaur Designation: Assistant Professor Department: Computer Science and Engineering Punjabi University Patiala

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## ADMINISTRATIVE EXPERINECE

#### **Present Duties:**

- Convener of M.Tech Admission Committee 2022.
- Serving as Reviewer to international conference Mauricon ICONIC 2022
- Coordinator of Ph.D. Visvesvaraya Scholarship Scheme since 2020 for CSE department.
- Website Management of the Department since 2020
- Member of Department Library Set-Up since 2020
- Member of DRB (Departmental Research Board) committee since 2020

#### **Previous Duties:**

- Member of BOS (Board of Studies)
- Worked as Secretary of ACD
- Member of Disciple Committee
- Was member of Grievance Management Cell
- Worked as a Member of the Student welfare/grievance cell.
- Worked as Superintendent in Examination duties.
- Worked as a Member of the Dissertation Pre-submission screening committee of the department.
- Worked as Co-coordinator of Theory exam conduct/schedule committee.
- Member of Admission Committee of B.Tech as well as M.Tech in 2020
- Superintendent in Examination Aug-Dec 2021.
- Member of M.Tech Admission Committee.
- Coordinator Part Time M.Tech 2021.
- Served as a Reviewer for the International Journal of Pervasive Computing and Communications

## **Events:**

#### Attended:

- Attended International conference in Hong Kong organized by IAENG in 2008
- Presently served as Session Chair at ICAML-2020 (International Conference on Applications of Machine Learning)
- Attended FDP on "Python and Emerging Trends in Machine Learning" in June 2020
- Attended a Faculty Development Program on "Internet of Things" (23-28 September 2019) with the collaboration of NITTR, Chandigarh
- Attended one-week STTP (Short Term Training Program), AICTE sponsored, on Next Generation Wireless Technologies; 5G and Beyond, held from 16<sup>th</sup> Aug-21<sup>st</sup> Aug 2021, organized by Indo Global College of Engineering, Abhipur, New Chandigarh.

## Organized

 Organized expert talk on the topic "Designing Conversational Agents for Programmers", in Department of Computer Science and Engineering, Punjabi University, Patiala, on Nov 1, 2021 (Resource Person: Dr. Sandeep Kutwal, Assistant Professor, University of Tulsa).

• Stage Hosting of International Conference in Department in 2017

## **Expert Talks Delivered:**

- 1. "Software Engineering (Clone Detection)", held on April 30, 2021, In CSE Department, Swami Vivekanand Institute of Engineering and Technology.
- 2. Resource Person during the conduct of a Three-day-Workshop on "Practical Applications of PHP and Joomla" and delivered a talk on "Introduction to PHP and XAMPP server", held from 25<sup>th</sup> to 27<sup>th</sup> March 2021, at Desh Bhagat College, Badwal-Dhuri, Patiala.

## Member International Conferences:

- 1. Member of Technical Committee, Session Chair, and Reviewer of ICAML-2020 (International Conference on Artificial Intelligence and Machine Learning), organized by CSE Department, Punjabi University, Patiala.
- 2. Member of Technical/ Program Committee of ICSCCC 2021 (International Conference on Secure Cyber Computing and Communications), sponsored by IEEE, organized by CSE department NIT, Jalandhar.
- 3. Member of Technical/ Program Committee of ICAIS, 2021 (International Conference on Artificial Intelligence and Smart Systems), organized by JCT College of Engineering and Technology, Coimbatore, India. (http://icaise.in/2021/committee.html)
- 4. Also, Member of the Technical/ Program Committee of ICAIS, 2022 (International Conference on Artificial Intelligence and Smart Systems), organized by JCT College of Engineering and Technology, Coimbatore, India. (http://icaise.in/2022/committee.html)
- 5. Member of International Committee: IAENG (International Association of Engineers)
- 6. Member of Technical Committee, Session Chair, and Reviewer of ICAML-2021 (International Conference on Artificial Intelligence and Machine Learning), organized by CSE Department, Punjabi University, Patiala.
- 7. Reviewer of 4th International Conference on Innovative Trends in Electronics Engineering, April 2023
- 8. Reviewer and Member of Technical/ Program Committee of third International Conference on Secure Cyber Computing and Communications, May 26-28, ICSCCC 2023

Examination	Name of	Name of	Year of	Percentag	Divisio	Subject
S	Institution	board/Universi	Passing	e of	n	
		ty		Marks		
Matric	Govt. High	PSEB, Mohali	1996	81	1st	All matric
Matric	School, Tanda					subjects
	Ram Sahai					
Senior	SPN college	PSEB, Mohali	1998	65	1st	Non-
Secondary	Mukerian					Medical
(10+2)						
B.E.	Baba Banda	PTU, Jalandhar	2002	70	1st	Computer
(Computer	Singh Bahadur					Science &
Science &	Engg College,					Engineerin
Engineering)	Fathegarh Sahib					g

## ACADEMIC QUALIFICATION

M.E.	Thapar Institute of Engineering and Technology, Patiala	Thapar Institute of Engineering and Technology, Patiala	2005	75	1st	Software Engineerin g
Ph. D.	Department of Computer Science & Engineering, Punjabi University, Patiala	Punjabi University, Patiala	2019	Overall Grade A (course Work)	1st	Computer Science & Engineerin g

## WORK EXPERIENCE

At Present, Working as Assistant Professor (Stage-III) in the computer engineering department (Punjabi University, Patiala, PUNJAB, INDIA)

Start Date/End Date: Nov 23,2009/Till Date
Assistant Professor
Employer: Computer Engineering Department, Punjabi Univ. Patiala (India)
Exp: 12 yrs

Start Date/End Date: June 4, 2009/ Nov 23,2009
Assistant Professor
Employer: Computer Engineering Department, Thapar University, Patiala (India)
Exp: 6 months

Start Date/End Date: Aug 9, 2006/ June 4, 2009
Assistant Professor
Employer: Computer Engineering Department, BBSBEC, Fatehgarh Sahib (Punjab) (India)
Exp: 2 yrs-10 Months

Start Date/End Date: Feb 1,2006/ August 8,2006
Assistant Professor
Employer: Computer Engineering Department, Institute Of Engg And Tech-Bhaddal, Ropar (Punjab) (India)
Exp: 6 Months

Start Date/End Date: July 21,2005/ Jan 31, 2006
Assistant Professor
Employer: Computer Engineering Department, GNDU Regional Campus, Jalandhar (Punjab) (India)
Exp: 6 Months

#### SUBJECTS TAUGHT

#### At the Undergraduate level:

- Data Structures using C++ and Java
- Python Programming
- Computer architecture
- Parallel architecture and computing
- Operating System
- Object-oriented-systems using UML (currently teaching)
- Compiler Design
- Advanced Data Structures
- Machine Learning using Python

#### At the Post-graduate level:

- Parallel Computing
- Advanced Software Engg
- Advanced Programming Languages
- Object-oriented-systems using UML
- Compiler Design
- Python Programming
- Advanced Data Structures

## **RESEARCH AREA**

- Software Engineering (SE)
- Software Designing & Construction (UML)
- Software Testing
- Data Mining/ Data Structures
- Machine Learning

## **REASERCH PAPERS PRESENTED OR PUBLISHED**

#### **National Conference**

- 1. Kaur Harpreet, Kaur Navjot " Software Engineering and Knowledge Engineering Issues in Bioinformatics" proceeding of National Conference on Bioinformatics (NCBC '05) at Thapar Institute of Engg. And Technology, Punjab, India.
- 2. Kaur Harpreet, Kaur Navjot "Algorithmic and Non-Algorithmic issues in Database Access to Bioinformatics" in National Conference on Bioinformatics (NCBC '05) at Thapar Institute of Engg. And Technology.
- 3. Kaur Harpreet, Singh Pardeep " Parallel Processing in Mobile Computing" in National Conference on "INNOVATION 2007" at B.B.S.B.E.C, Fatehgarh Sahib page 147-151
- 4. Kaur Harpreet, Singh Pardeep" Just in Time Teaching" ISTE Section Annual Convention(SAC 07), Nov 18-19,2007 at NIT Hamirpur
- Kaur Harpreet, Singh Pardeep" Model Driven Architecture and CASE" Advancements in Computer Engg (ACE'08), April 3-4,2008 at B.B.S.B.E.C, Fatehgarh Sahib, pp 82-84
- 6. Kaur Rupinder, Kaur Prabhjot, Kaur Harpreet, "Nicad Automated Detection of Nearmiss clones", Challenges in Emerging Computing Technologies, May 16-17, 2012, Rayat and Bahra Institute of Engg. & Bio-Technology

- Kaur Rupinder, Kaur Prabhjot, Kaur Harpreet, "JplaG : Token Based Technique in Plagiarism Detection", 7<sup>th</sup> National Conference on Innovative Developments in Engineering Applications at Bhai Gurdas Institute of Engg. & Tech., Sangrur, 13-14 April 2012
- 8. Jasmine Kaur, Harpreet Kaur, "Developments in the Technique of Metamorphic Testing: A Review of Studies", National conference on Advancements in Electrical and Electronics Communication Engineering (AEECE-2015), Feb 20-21, 2015, pp 5-9

## **International Conference**

- Kaur Harpreet, Singh Amandeep, Singh Pardeep "Comparison of Variants of BLAST" The 2008 IAENG International Conference on Bioinformatics(IMECS 2008), Hong-Kong, March 19-21,pp- 190
- Prabhjot Kaur, Rupinder Kaur, Harpreet Kaur, "ConQat: A Tool to Detect gapped and ungapped clones", International Conference on Advanced Computing Technologies at Gurukul Vidyapeeth Institute of Engineering and Technology, Banur, Patiala, (8-9) june, 2012
- 3. Kaur Rupinder, Kaur Harpreet, Kaur Prabhjot, "PMD-Copy/Paste Detector:Token-Based Plagiarism Detection Tool", International Conference on Advanced Computing Technologies at Gurukul Vidyapeeth Institute of Engineering and Technology,Banur, Patiala,(8-9) june, 2012
- 4. Kaur Balwinder, Kaur Harpreet, "A review of Clone Detection in UML Diagrams", International Conference on innovative research in "Mechanical, Electrical, Electronics, Civil, Computer Sceince and information Technology (MECIT-2015)" organized by "Krishi Sanskriti" at Jawaharlal Nehru University, New Delhi, 16-17 may, 2015
- 5. Jasmine Kaur, Harpreet Kaur, "Metamorphic Testing as a testing technique and an Automated Debugging Tool", Innovative Research in "Mechanical, Electrical, Electronics, Civil, Computer Science and Information Technology (MECIT-2015)", organized by "Krishi Sanskriti", 16-17 may 2015, pp 37-40
- 6. Harjot Singh, Harpreet Kaur, "Improved Deadlock Avoidance Algorithm: Banker's Algorithm", 6th IEEE International Conference on Communication Systems and Network Technologies (CSNT-2016), held on Mar 05-07, 2016.
- Gagandeep Kaur, Harpreet Kaur, "Various Tools and Techniques to Assess Information from Big Data", International Conference on Recent Trends in Computing, held in August 30-31, 2016
- 8. Ekta Rani, Harpreet Kaur, "Cloud Based Software Testing", International Conference on Recent Trends in Computing, held in August 30-31, 2016
- 9. Kaur, G. and Kaur, E.H., "Prediction of the cause of accident and accident prone location on roads using data mining technique". 8th International Conference on Computing, Communication and Networking Technologies (ICCCNT) (pp. 1-7), 2017. IEEE.
- 10. Kaur, H. and Maini, R., 2016, February. Identification of recurring patterns of code to detect structural clones. In 2016 IEEE 6th International Conference on Advanced Computing (IACC) (pp. 398-403). IEEE.

- 11. Kaur, H. and Maini, R.,. Granularity-Based Assessment of Similarity Between Short Text Strings. In Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems (pp. 91-107). Springer, 2019
- 12. Harbinder Kaur, Nirvair Neeru and Harpreet Kaur, Title: A Survey of Image De-noising Techniques, May, ICAML-2020.
- 13. Harjeet singh and Harpreet Kaur, A Survey on Brain Tumor Cell Image Segmentation and Detection Techniques, Nov ICAML 2021.
- 14. Kaur, G., Goyal, S. and Kaur, H. Brief Review Of Various Machine Learning Algorithms. In *Proceedings of the International Conference on Innovative Computing & Communication (ICICC)*, ., 2021, December
- 15. Savia and Harpreet Kaur, "Review of different techniques to predict heart disease with ML algorithms with Paper ID: 127', in ICAML 2021Harjeet Singh and Harpreet Kaur, 'A Survey on Brain Tumor Cell Image Segmentation and Detection Techniques", in ICAML, Nov, 2021.
- 16. Niharika, Harpreet Kaur and Jaswinder Singh, "Electricity Consumption Forecasting System using ARIMA model", in ICAML Nov, 2021
- 17. Savia and Harpreet, "Review of Different Techniques to Predict Heart Disease with ML Algorithms", International Conference of Artificial Intelligence and Machine Learning (ICAML), Punjabi University Patiala, 2-3 Dec 2021.
- 18. Savia and Harpreet, "Machine Learning Algorithms to Forecast a Heart Disease", International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering &Technology, Nov 2022 (Springer Book Series)
- 19. Harveen Kaur, Harpreet kaur, and Navjot Kaur, "A Novel Approach to Combat COVID-19 using Smart-ID-Cards", 3rd International Conference on Computing, Analytics and Networks (ICAN), Nov 2022, (pp. 1-5). IEEE.
- 20. Tanudeep and Harpreet, "Fog Computing Based Framework for Healthcare Systems", 4<sup>th</sup> *International Conference on Innovative Trends in Electronics Engineering ICITEE 2023.*
- 21. Rajni and Harpreet, "A Survey on Crop Yield Prediction using Machine Learning", 4<sup>th</sup> *International Conference on Innovative Trends in Electronics Engineering ICITEE 2023.*

#### **International Journals**

- 1. Rupinder Kaur, Harpreet Kaur, Prabhjot Kaur, "Evaluation of token based tools on the basis of clone metrics", International Journal of Advanced Research in Computer Science and Electronics Engineering, *Volume 1, Issue 3, May 2012, ISSN: 2277 9043*
- 2. Prabhjot Kaur\*, Harpreet Kaur, Rupinder Kaur, "Comparison of Clone Detection Tools: CONQAT and SolidSDD", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 2, Issue 5, May 2012 ISSN: 2277 128X

- 3. Anshu Rani and Harpreet Kaur, "Refactoring Methods and Tools", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 2, Issue 12, December 2012, ISSN: 2277 128X
- 4. Isha Malik, Harpreet Kaur, "USE OF AUTOMATED TOOLS IN REVERSE ENGINEERING', International Journal of Advanced and innovative research, Published in IJAIR, Volume 2, Issue 3 March 2013, ISSN: 2278-7844
- Isha Malik, Harpreet Kaur," To Measure the Complexity and Enhance the Performance of UML Class Diagram Combining Reverse Engineering and Refactoring", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 8, August 2013, ISSN: 2277 128X
- 6. Sherry Singla, Harpreet Kaur, "Selenium Keyword Driven Automation Testing Framework", International journal of advanced research in Computer Science and Software engineering, Volume 4, Issue 6, June 2014
- Pamilpreet Singh, Harpreet Kaur, "Detection of Clones form UML diagrams (Unified Modeling Language)", International; journal for Scientific Research & Development / Vol 2, Issue 05, 2014/ISSN : 2321-0613
- 8. Rani, A. and Kaur, H., 2014. Detection of bad smells in source code according to their object oriented metrics. *International Journal for Technological Research in Engineering Volume*, *1*. ISSN (Online): 2347 4718
- 9. Kaur Balwinder, Kaur Harpreet, ""Clone Detection in UML diagrams using token based approach", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 5, Isuue5, June 2015, ISSN: (online-2277 128X) (print: 2277 6451)
- 10. Er, A.S. and Er, H.K., "REVIEW ON HIGH AVAILABILITY AND FASTER CONVERGENCE IN IP NETWORKS", *International Journal of Advanced Research in Computer Science*, 8(7), 2017, ISSN No. 0976-5697.
- 11. Kaur, G. and Kaur, H., 2017. Black spot and accidental attributes identification on state highways and ordinary district roads using data mining techniques. *Int. J*, 8(5).
- 12. Rani, E. and Kaur, H., 2017. Efficient Load Balancing Task Scheduling in Cloud Computing using Raven Roosting Optimization Algorithm. *International Journal of Advanced Research in Computer Science*, 8(5).
- 13. Kaur, H. and Maini, R., 2017. Performance Evaluation and Comparative Analysis of Code-Clone-Detection Techniques and Tools. *International Journal of Software Engineering and Its Applications*, 11(3), pp.31-50.
- Kaur, H. and Maini, R., 2019. Assessing lexical similarity between short sentences of source code based on granularity. *International Journal of Information Technology*, 11(3), pp.599-614. (01 September 2019)
- 15. Similarity Detection in Sanskrit Documents using Binary. Search Tree, IJIACS 7 (3), ISSN 2347 8616, june 2018

- 16. Kaur, H. and Maini, R.,. Function clone removal using refactoring techniques. *Advances in Mathematics: Scientific Journal*, 9(6), pp.4001-4013, aug 2020
- 17. Harbinder Kaur, Nirvair Neeru and Harpreet Kaur, "SALT & PEPPER IMAGE DE-NOISING USING WEIGHTED AVERAGE OF NOISY IMAGE WITH LOCAL REGIONS", Kala Sarovar, ISSN: 0915-4520, vol-23 No-04(IX), Aug 2020.
- Gagandeep Kaur, Goyal S, Kaur H. Brief Review of Various Machine Learning Algorithms Published in SSRN Conference Series, Elsevier 3747597. 2020 Dec 12, ICCRDA-2020
- 19. Niharika, Harpreet Kaur and Jaswinder Singh (2022), "Electricity Consumption Forecasting System of India: A Review", Advances in Mathematics: Scientific Journal, Vol. 11, No. 3, pp. 249–273, ISSN: 1857-8365 (printed); 1857-8438 (electronic) https://doi.org/10.37418/amsj.11.3.8
- 20. Avtar Singh, Navjot Kaur and Harpreet Kaur, "An extensive vulnerability assessment and countermeasures in open network operating system software defined networking controller. *Concurrency and Computation: Practice and Experience*, *34*(15), p.e6978.
- 21. Harman, Amrit Kaur and Harpreet Kaur, "Performance Analysis of Missing Data Imputation Methods", International Journal of Scientific Research and Engineering Trends, Vol.8, Issue 4, July-Aug 2022, PP.1722-1727. ISSN: 2395-566X
- **22.** Harpreet Kaur, "Detection Of Code Clones In Open Source Software Using Proposed Generalized Template", *Webology*, Volume 19, Number 2, 2022, ISSN: 1735-188X), pp. 4284-
- **23.** Singh Avtar, Kaur Navjot, Kaur Harpreet Extensive performance analysis of OpenDayLight (ODL) and Open Network Operating System (ONOS) SDN controllers. Microprocessors and Microsystems. Nov 2022; Vol. 95, p.104715.
- **24.** Kaur, G., Kaur, H. and Goyal, S., Correlation analysis between different parameters to predict cement logistics. *Innovations in Systems and Software Engineering*, Dec 2022, pp.1-11. ESCI
- 25. Mehzabeen and Harpreet, "An Efficient Deep Learning based Hybrid Model for Image Caption Generation", International Journal of Advanced Computer Science and Applications (IJACSA), Volume 14 Issue 3, March 2023, pp. 231-237 (<u>Scopus (Elsevier)</u>, <u>Web of Science (Clarivate / Thomson Reuters)</u>, Inspec (IET), Ei Compendex)
- 26. Rajni and Harpreet, "Automated approach to classification of crops using SVM and Neural Network", Journal of Data Acquisition and Processing, ISSN: 1004-9037, June 2023
- 27. Tanudeep and Harpreet, "Fog Based Intelligent Healthcare Framework For Monitoring The Body Movements Of Coma Patient", Journal of Data Acquisition and Processing, ISSN: 1004-9037, June 2023

# PATENT PUBLICATION/Granted

List of patents granted	SYSTEM AND METHOD OF MONITORING AND PREVENTING THE SPREAD OF INFECTIOUS VIRUS Date of Grant: 19-01-2023 Publication Date: 30-7-2021 PATENT NO. 418662 PATENT APPLICATION NO. 202111031883 A
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# **BOOK CHAPTERS PUBLISHED**

Author	Book Name	Chapter Name	Publisher	Year	ISBN	Publisher Name
Harpreet Kaur and Harveen Kaur	COVID-19: A Multidisciplinary	TO FIGHT COVID-19 USING MACHINE LEARNING APPROACH: A CHALLENGE	Publisher	Published in 2021	978-81-212-2046- 0	Gyan Publishing House
Harveen Kaur, Harpreet Kaur and Navjot Kaur	Intelligence, Machine	Role of IoT Based Smart Mask to Combat Covid-19	International Publisher	2022	9781003250357	CRC Press, Taylor and Francis Group

**BOOK EDITED** 

Editor Name (s)	Book Name	Publisher	Year	ISBN	Publisher Name
Dr. Harpreet Kaur, Dr. Navdeep Kanwal, Dr. Abhinav Bhandari, Er. Amrit Kaur, Er. Navroz Kaur Kahlon, Er. Priyanka Jairal	Applications of AI and	International	May 2020	978-81- 941048- 7-2	Department of Computer Science & Engineering, Punjabi University, Patiala

# **RESEARCH GUIDANCE (M.TECH AND PHD)**

Sr. No.	Session	Student Name	Thesis Entitled
1	May 2012	Rupinder Kaur	Evaluation of clone detection tools on the basis of clone metrics
2	May 2012	Prabhjot Kaur	Evaluation and analysis of clone detection tools:ConQat, SolidSDD and DupScout
3	June 2013		To measure the complexity and enhance the performance of UML class diagram combining reverse engineering and refactoring
4	June 2013		Comparative analysis between histogram, EBGM ,and Eigen based face recognition methods
5	June 2013		Detection of Clones from UML Class Diagrams
6	June 2014	Anshu	To improve code quality by identifying bad smells using refactoring techniques and metrics
7	June 2014	Sherry Singla	Selenium Keyword driven automation testing framework
8	June 2014	Avtar Singh	Evaluation of AODV protocol in MANETS NS-2
9	June 2015	Pamilpreet	Token based approach for the detection of code similarity
10	June 2015	Baljinder Kaur (part time)	Clone Detection in UML sequence diagrams using token based approach
11	June 2015	Jasmine	Efficacy of metamorphic testing as a technique of program testing and debugging
12	June 2016	Harjot	Improved Deadlock Avoidance Algorithm: Banker's Algorithm
13	July 2017	Gagan	Black Spot and Accidental Attributes Identification and Prediction on State Highways and Ordinary District Roads
14	July 2017	Ekta	Efficient Load Balancing Task Scheduling in Cloud Computing using Raven Roosting Optimization Algorithm
15	July 2018	Avtar	Analysis of High Availability and Faster Convergence Techniques in IP networks
16	June 2019	Monika	Similarity Detection in Sanskrit Documents using Binary Search Tree
	2019	Bharti	Traffic Management System using Internet of Things (IOT)
17	August 2020	Harbinder kaur	Salt & pepper image de-noising using weighted average of noisy image with local regions
18	Pass out 31 <sup>st</sup> March 2022 (Enrolled in Aug 2020)	NIHARIKA	An Efficient Electricity Consumption Forecasting System of INDIA
19	Aug 2022	Harmandeep Singh	

19	Savia	Feb 2023		Heart Disease Prediction Using Machine Learning
19	Aug 2023	Rajni Devi		Automated approach for Classification of Crops using SVM and Neural Networks
20	Sept 2023	Tanudeep		Development of FOG based healthcare Framework for Monitoring the body movement of Coma patient
21	Gagandeep Kaur	PhD Registered	Candidate	
22	Mehazbeen Kaur	PhD Registered	Candidate	
23	Avtar Singh	Submitted 7	Thesis	
24	Harjeet Singh	PhD Registered	Candidate	
25	Harveen Kaur	PhD Registered	Candidate	

## WORKSHOPS/SEMINARS/SHORT TERM COURSES ATTENDED

	02-06 June
Python and Emerging Trends in Machine Learning" conducted by Fork Coding School	2020
one week short term training program (AICTE sponsored) on Next Generation Wireless	16-21 Aug,
Technologies: 5G and Beyond	2021
Attended Two-Week Online Winter School [Mathematics, Data Analysis, Computer	28-jan-2022
Technology, Engineering Sciences (Chemical, Civil, Electronics, and Mechanical etc),	to 11-feb-
Architecture and Planning] conducted from 28-1-2022 to 11-2-2022.	2022

## WORKSHOPS/SEMINARS/SHORT TERM COURSES ORGANIZED

#### Seminar:

1. Designing Conversational Agents for Programmers, 1<sup>st</sup> Nov 2021, held online, Department of Computer Science & Engineering

Resource Person: Dr. Sandeep Kuttal, Associate Professor, Computer Science, NC State University.