Curriculum Vitae

JASLEEN KAUR, PhD

Postdoctoral Research Fellow | School of Public Health Sciences
University of Waterloo, Waterloo, ON, Canada
Jasleen.kaur@uwaterloo.ca | jasleenkochar89@gmail.com
Google Scholar | LinkedIn | Research Gate | ORCID

Education

2015- 2021
PhD (Doctor of Philosophy), Computer Science & Engineering
  Indira Gandhi Delhi Technical University for Women, Delhi, India
  Supervisor: Prof. SRN Reddy
  Scholarship: Project funded by Microsoft University Relations, Finland
  Thesis title: Design & Development of Configurable and Customizable Systems: A Lightweight
  Operating System Framework for Smart Devices

2011- 2013
MTech (Master of Technology), Computer Science & Engineering
  Maharishi Markandeshwar University Mullana, India
  Supervisor: Prof. Neera Batra
  Thesis title: A Traffic Aware Health Monitoring System Embedded in Smart Ambulance

2007- 2011
BTech (Bachelor of Technology), Computer Science & Engineering
  Kurukshetra University, Haryana, India

Professional Experiences

Adjunct Assistant Professor (2023- Present)
School of Public Health Sciences, University of Waterloo, 200 University Avenue West, Waterloo,
ON, Canada N2L 3G1.
- Collaborating on global health research projects
- Serving graduate student thesis committees

Postdoctoral Research Fellow (2022- Present)
Ubiquitous Health Technology Lab (UbiLab), School of Public Health Sciences, University of
Waterloo, 200 University Avenue West, Waterloo, ON, Canada N2L 3G1.
- *Developer Manager*- Managing the development team and project timelines; and handling
  the technical issues and challenges faced by developers/project leads.
- *Research & Development*- Public health research focused on generating public health
  indicators using an IoT-based big data; social media public health data focused on
  developing surveillance ecosystem to support infodemic management; early warning

systems for public health to monitor and predict the adverse health outcomes of heatwaves and air pollution.

- Writing research papers and project proposals.

Research Scientist (2019-2022)

HTAIn Secretariat, Indian Council of Medical Research, Department of Health Research, Ministry of Health, and Family Welfare (MoHFW), New Delhi, India.

- Research & Development- Public health research focused on development of Antimicrobial Resistance (AMR) surveillance system using a One Health approach; management Covid-19 pandemic data; automation of computational workflow of genomic analysis.
- Writing research papers and project proposals

Assistant Professor (2018-2019)

Computer Science & Engineering Department, Maharishi Markandeshwar Deemed to be University, Mullana, India.

- Teaching- Application development, Fundamentals of Python Programming, Database management
- ERP coordinator- Monitoring of the attendance data to ensure compliance with university policies and regulations.

Research Scholar (2014–2017)

MEK Project funded by Microsoft University Relations, Finland at Indira Gandhi Delhi Technical University for Women, Delhi, India.

- Research & Development- IoT based research focused on development of IoT wearables and an automated pipeline for building light weight operating system for IoT devices.
- Writing research papers, project proposals and organizing workshops.
- Teaching Assistant- Embedded System Design & Mobile Architecture Programming

Assistant Professor (2013-2014)

Computer Science & Engineering Department, Kalpi Institute of Technology, Ambala affiliated to Kurukshetra University, Haryana, India.

- Teaching- Operating Systems and Database Management

Research Interests & Skills

Research Interests

- Digital Health
- Health Informatics
- Public Health
- Data Science
- Data Analytics & Monitoring
- IoT & AI in Healthcare
- Clinical Decision Support Systems (CDSS)
- IoT Operating Systems

Hardware and Software skills

- Tools: Microsoft Azure, Azure Databricks, Azure SQL Database, Azure Gen 2 Data Lake, Elastic Stack, Kibana, Tableau, Jira, Trello.
- Technical Skills: Data analysis & visualization, Scientific computing, Internet of Things, Artificial Intelligence, Machine Learning, Statistical Analysis, Web APIs development and testing, Graphical User Interfaces (using PyQt5, Tkinter), Big Data (using PySpark)
- Programming Languages: Python (Core, Advanced, Biopython), R, C, C++, Java, Shell Scripting.
- Databases: MySQL, PostgreSQL
- Web Technologies: HTML, JavaScript, PHP, CSS
- Embedded Systems Platforms: Raspberry pi, Arduino, Intel Galileo, Intel Edison
- OS Platforms: Linux, Unix, Windows XP/7/8/10, Android

Personal Skills

- Aptitude to learn and adapt to new systems and environment obtained through work and international experience.
- Well-organized, visionary educator and team leader, goal-oriented, analytical, and problem-solving skills obtained from my work experience both in research & development and academic environments.
- An independent worker but also a team player with an ability to effectively work in multidisciplinary teams.

Publications

Shared first Authorship$^\$$/Corresponding Author*

Refereed Journals (Accepted/Published)

1. Plinio P Morita$^\$$, Irfhana Zakir Hussain$^\$$, **Jasleen Kaur$^\$$**, Matheus Lotto, Zahid Ahmad Butt (2023). "Tweeting for Health using Real-Time Mining and AI-Based Analytics: Design & Development of as Misinformation Data Ecosystem for Twitter", Journal of Medical Internet Research (JMIR). DOI: 10.2196/44356.
2. Matheus Lotto, Irfhana Zakir Hussain, **Jasleen Kaur**, Zahid Ahmad Butt, Thiago Cruvinel, Plinio P Morita (2022). "Topic modelling analysis of fluoride-related misinformation on Twitter: Infodemiology study", *JMIR*, 2022. DOI: http://doi.org/10.2196/preprints.44586. [Accepted]
3. Jasmine Kaur$^\$$, **Jasleen Kaur$^\$$**, Harpreet Singh (2022). "Ranking methodology for evaluating region-wise COVID-19 testing performance in India", *Frontiers in Public Health*. DOI: 10.3389/fpubh.2022.887665.
4. **Jasleen Kaur$^\$$**, Jasmine Kaur$^\$$, Ajay Singh Dhama, Shelja Jindal, Kamini Walia, Harpreet Singh (2022). "Strengthening the Surveillance of Antimicrobial Resistance in India Using Integrative Technologies", *Frontiers in Public Health*. DOI: 10.3389/fpubh.2022.861888.
5. Jasmine Kaur, **Jasleen Kaur**, Ajay Singh Dhama, Vinit Kumar, Harpreet Singh (2021). "Management of COVID-19 Pandemic Data in India: Challenges Faced, and Lessons Learnt", *Frontiers in Big Data*, 2021, Nov 2021. DOI: 10.3389/fdata.2021.790158.

6. Jasmine Kaur, Ajay Singh Dhama, **Jasleen Kaur**, Kamini Walia, Vinod Ohri, Vinit Kumar, Andrew M Lynn, Alok Srivastava, Harpreet Singh (2021). "ICMR's Antimicrobial Resistance Surveillance system (i-AMRSS): A promising tool for Global AMR Surveillance", *JAC-Antimicrobial resistance*, March 2021. DOI: 10.1093/jacamr/dlab023.

7. **Jasleen Kaur**, Jasmine Kaur, Shruti Kapoor and Harpreet Singh (2021). "*i*-DIA: Design & Development of Customizable Web API for Interoperability of Antimicrobial Resistance data", *Nature Scientific Reports*, 2021. DOI: https://doi.org/10.1038/s41598-021-90601-z.

8. **Jasleen Kaur** and SRN Reddy (2021). "Design & Development of Lightweight Operating System Framework for Smart Devices", *International Journal of Software Innovation (IJSI)*, 2021. DOI: 10.4018/IJSI.2021040108.

9. Jasmine Kaur, Vijay Chandra Verma, Vinit Kumar, Harish Buttolia, Bhavik Chaudhary, Yogesh Singh Sharma, **Jasleen Kaur**, Smita Deshpande, Harpreet Singh (2020). "*i*-MANN: A web-based system for data management of Mental Health Research in India". *Indian Journal of Psychological Medicine*, 2020. DOI: 10.1177/0253717620969064.

10. Neera Batra, **Jasleen Kaur** and NK Batra (2020). "SmartCOdetect: An Automated Car Window Opening System on Detection of Carbon Monoxide", *International Journal of Vehicle Structures and Systems,* 2020. DOI:10.4273/ijvss.12.4.09.

11. **Jasleen Kaur** and SRN Reddy (2020). "Implementation of Linux Optimization Technique for ARM Based System on Chip", *Procedia Computer Science*, 2020, Vol. 171, pp. 1780-1789. DOI: 10.1016/j.procs.2020.04.191

12. **Jasleen Kaur** and SRN Reddy (2020). "SchedCust: Design & Development of scheduling policy customization framework for ARM based System on Chip", *Procedia Computer Science*, 2020, Vol. 171, pp. 627-634. DOI: 10.1016/j.procs.2020.04.068.

13. **Jasleen Kaur** and SRN Reddy (2019). "Operating System for Low-End Smart Devices- A Survey and a Proposed Solution Framework", *International Journal of Information Technology*, Vol. 10, Issue 1, pp. 49-58. DOI: 10.1007/s41870-017-0044-5.

14. **Jasleen Kaur** and SRN Reddy (2019). "Testing of Linux Performance Monitoring Tools on ARM Based Raspberry Pi", *Journal of computational and theoretical nanoscience*, 2019. DOI: 10.1166/jctn.2019.8276.

15. **Jasleen Kaur,** Neera Batra and Sonali Goyal (2019). "SmartEmoDetect: An IoT Based Emotion Monitoring Wearable Technology for Drivers", *Journal of computational and theoretical nanoscience*, Vol. 16, No. 9, pp. 3969-3973, 2019. DOI: 10.1166/jctn.2019.8279.

16. SRN Reddy, **Jasleen Kaur**[*], Suresh Chande and Rama K. Challa (2018). "My smartphone kit: Design and development of an integrated platform for innovation and product design in engineering education", *Computer Applications in Engineering Education*, 2018. DOI: https://doi.org/10.1002/cae.21919.

17. Monika Mor, **Jasleen Kaur**[*] and SRN Reddy (2017). "My Smart BT: A Bluetooth based Android Application for controlling IoT appliances using graphical analysis of sensor data", *International Journal of Mobile Network Design and Innovation*, Vol.7, No.3/4, pp. 189-198, 2017. DOI: 10.1504/IJMNDI.2017.089300.

18. SRN Reddy, **Jasleen Kaur**[*] and Suresh Chande (2016). "Summer Training Programs - A Practical & Collaborative Approach in Technical Education through Mobile Education Kit", *International Journal of Mobile Learning and Organization*. Vol. 11, No.1, pp.15-29, 2016. DOI: https://doi.org/10.1504/IJMLO.2017.080890.

19. **Jasleen Kaur** and Neera Batra (2014). "A Traffic Aware Health Monitoring Application Embedded in Smart Ambulance (THESA)", *International Journal of Computer Sciences & Engineering*, Vol. 2, Issue- 11, 2014.

Refereed Conference Proceedings (Accepted/Published)

20. Kang Wang, Pritthijit Nath, **Jasleen Kaur**, Shi Chao, Plinio P Morita (2023), "Cloud Native Remote Monitoring Data Ecosystem for Aging Population based on Commercial AAL Sensors", EMBC 2023: International Conference of the IEEE Engineering in Medicine and Biology Society, July 2023, Sydney, Australia. [Accepted]

21. Irfhana Zakir Hussain, **Jasleen Kaur**, Matheus Lotto, Zahid Ahmad Butt, Plinio P Morita (2023). "Design & Development of Misinformation Analysis System for Government Prevention of Public Health Crisis", eHPWAS'23: Eleventh international workshop on e-Health Pervasive Wireless Applications and Services, June 2023, Montreal, Canada. [Accepted]

22. Pedro Augusto Da Silva E Souza Miranda, **Jasleen Kaur**, Plinio P Morita (2023). "UbiSecE: UbiLab's Secure Cloud Environment for Public Health Research in Microsoft Azure", eHPWAS'23: Eleventh international workshop on e-Health Pervasive Wireless Applications and Services, June 2023, Montreal, Canada. [Accepted]

23. **Jasleen Kaur**, Kirti Sahu, Arlene Oetomo, Plinio P Morita (2022). "A Smart Thermostat-Based Population-Level Behavioural Changes During the COVID-19 Pandemic in the United States: A Proposed Study", DIGIBIOM 2022: Emerging Devices for Digital Biomarkers, July 1, 2022, Portland, US. DOI: 10.1145/3539494.3542756.

24. Shahan Salim, Irfhana Zakir Hussain, **Jasleen Kau**r, and Plinio P Morita (2022). "Air Pollution Surveillance Ecosystem: A Big Data Approach to Monitoring Adverse Outcomes for Public Health Interventions", IEEE Bigdata 2022. DOI: 10.1109/BigData55660.2022.10020691.

25. **Jasleen Kaur** and SRN Reddy (2018). "SFrame: Design & Development of Smart Framework to Port Linux Kernel on ARM based Raspberry Pi", 2018 *International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, pp. 969-975, 2018. DOI: 10.1109/ICACCI.2018.8554798.

26. P. Sai Sheela, Rashika Joshi, **Jasleen Kaur**, SRN Reddy (2017). "A Survey on Smart learning platforms for kids", ICEIT Conference Advances in Mobile Communications, Networking and Computing- MCNC 2017, 16-17 February 2017.

27. P. Sai Sheela, Rashika Joshi, **Jasleen Kaur** and SRN Reddy (2017). "SnapBook- Design & Development of an Interactive Learning Device for Kids", International Conference on Communication, computing and Networking, 23-24th March 2017, NITTTR Chandigarh.

28. Deepika Wadhwa, **Jasleen Kaur** and SRN Reddy (2017). "PiAttendance: Design & Development of Biometric Portable Attendance System", International Conference on Communication, computing and Networking, 23-24th March 2017, NITTTR Chandigarh.

29. **Jasleen Kaur** and SRN Reddy (2016). "Design & Development of My SmartPhone Kit: A Practical Approach for Technical Education", *National Conference on Product Design,* 2016.

30. **Jasleen Kaur** and SRN Reddy (2015). "System on Chip (SoC) for Mobile & Hand-held Devices- A Case Study", *ICEIT Conference on Advances in Mobile Communications, Networking and Computing*, New Delhi, 16-17 April 2015.

Conference Research Abstract Presentations (Accepted/Presented)

31. **Jasleen Kaur**, Kirti Sahu, Arlene Oetomo, Vivek Chauhan, Plinio P Morita (2023). **"**Public health monitoring of behavioural risk factors in USA: An exploratory study ", 16th European Public Health Conference. [Accepted]

32. **Jasleen Kaur**, Gurjot Singh, Arlene Oetomo, Plinio P Morita (2023). **"**Deep learning models to forecast indoor temperatures in heatwaves in Canada: An exploratory study ", 16th European Public Health Conference. [Accepted]

33. Irfhana Zakir Hussain, **Jasleen Kaur**, Matheus Lotto, Zahid Ahmad Butt, Plinio P Morita (2023). **"**Infodemics surveillance system to detect and analyse health misinformation using big data and AI", 16th European Public Health Conference. [Accepted]

34. Pedro Miranda, **Jasleen Kaur**, Shahabeddin Abhari, Plinio P Morita, "ChatGPT for Systematic and Scoping Reviews in Public Health Research: An Applicable Approach", 16th European Public Health Conference. [Accepted]

35. **Jasleen Kaur**, Arlene Oetomo, Gurjot Singh, Plinio P Morita, "Deep Learning Models to Forecast Indoor Temperatures in Heat Waves in Canada: An Exploratory Study Using Smart Thermostats", EMBC 2023: International Conference of the IEEE Engineering in Medicine and Biology Society, July 2023, Sydney, Australia. [Accepted]

36. **Jasleen Kaur**, Kirti Sahu, Arlene Oetomo, Vivek Chauhan, Plinio P Morita, "Impact of Covid-19 pandemic on population-level behavioral changes: An IoT based study in USA", EMBC 2023: International Conference of the IEEE Engineering in Medicine and Biology Society, July 2023, Sydney, Australia. [Accepted]

37. Shahan Salim, Irfhana Zakir Hussain, **Jasleen Kaur**, Plinio P Morita, "IoT-Enabled Machine Learning for Early Detection of Air Pollution-Induced Health Hazards", EMBC 2023: International Conference of the IEEE Engineering in Medicine and Biology Society, July 2023, Sydney, Australia. [Accepted]

38. Irfhana Zakir Hussain, **Jasleen Kaur**, Matheus Lotto, Zahid Ahmad Butt, Plinio P Morita (2022). "Design & Development of Misinformation Analysis System for Government Prevention of Public Health Crisis", IEEE BHI-BSN 2022. [Presented]

39. **Jasleen Kaur**, Kirti Sahu, Arlene Oetomo, Vivek Chauhan, Plinio P Morita (2023). "Impact of Covid-19 pandemic on population-level behavioural changes: An IoT based study in USA", School of Public Health Sciences, Research and Practice in Health Sciences, Waterloo, Canada. [Presented]

40. Irfhana Zakir Hussain, **Jasleen Kaur**, Matheus Lotto, Zahid Ahmad Butt, Plinio P Morita (2023). "Preventing Public Health Crises: An Expert System using Big Data and AI in Combating the Spread of Health Misinformation", World Congress on Public Health (WCPH-2023) Rome, Italy. [Presented]

41. Arlene Oetomo, **Jasleen Kaur**, Kang Wang, Zahid Ahmad Butt, Peter Berry, Plinio P Morita (2023). "Indoor temperatures in Canadian heat health warning systems: Deployment of a real-time indoor temperature data ecosystem with community housing and local health partners", School of Public Health Sciences, Research and Practice in Health Sciences, Waterloo, Canada.

42. Arlene Oetomo, **Jasleen Kaur**, Kang Wang, Zahid Ahmad Butt, Peter Berry, Plinio P Morita (2023). "The case for indoor temperature in heat health warning systems: Deployment of a real-time indoor temperature data ecosystem in community housing", World Congress on Public Health (WCPH- 2023) Rome, Italy.

43. Matheus Lotto, Irfhana Zakir Hussain, **Jasleen Kaur**, Zahid Ahmad Butt, Thiago Cruvinel, Plinio P Morita (2023). "Fluoride-related misinformation analysis on Twitter: Infodemiology study", World Congress on Public Health (WCPH- 2023) Rome, Italy.

44. Matheus Lotto, Irfhana Zakir Hussain, **Jasleen Kaur**, Zahid Ahmad Butt, Thiago Cruvinel, Plinio P Morita (2023). Topic modeling analysis of fluoride-related misinformation on Twitter: Infodemiology study. 52nd Annual Meeting & Exhibition of the AADOCR, Portland, OR, USA.

Journals (Communicated/Under review)

45. **Jasleen Kaur**, Kirti Sahu, Arlene Oetomo, Vivek Chauhan, Plinio P Morita (2023). "Influence of political parties on public health policies in the USA: An IoT-based population-level sleep health analysis during COVID-19 pandemic", Oxford Journal of the American Medical Informatics Association (JAMIA).

46. Ajay Singh Dhama[$], Vinit Kumar[$], Jasmine Kaur[$], **Jasleen Kaur**[$], Abhishek Yadav[$], Harpreet Singh (2022). "i-CVsuite: An ensemble of tools for COVID-19 pandemic management in India", *The Lancet Regional Health- Southeast Asias*. DOI: 10.2139/ssrn.4349687.

47. **Jasleen Kaur**[$], Jasmine Kaur[$], Shelja Jindal, Ajay Singh Dhama, Kamini Walia, Harpreet Singh (2021). "Emergent Advancements in Antimicrobial Resistance Surveillance System: An Integrative & Hybrid Approach", *Nature Scientific Reports*.

48. Jasmine Kaur[$], **Jasleen Kaur**[$], Santosh Kumar Shah, Vinit Kumar, Harpreet Singh (2022). "*i-MITS*: A data management tool for a pilot study to determine the cause of childhood associated mortality using MITS technique", *Journal of Paediatrics Healthcare*.

49. **Jasleen Kaur**[$], Shruti Kapoor[$], Maninder Singh, Parvinderjit Singh Kohli, Urvinder Singh, Harpreet Singh (2022). "Emergent Advancements in Mycobacterium Tuberculosis Detection: An Artificial Intelligence Approach", *JMIR*. DOI: 10.2196/preprints.29050.

Conferences (Communicated/Under review)

50. **Jasleen Kaur,** Vivek Chauhan**,** Arlene Oetomo, Kirti Sundar Sahu, and Plinio P Morita (2023), "Quantifying Sleep Quality Using Zero-Effort Technology: An Exploratory Study", IEEE-BHI 2023: IEEE EMBS International Conference on Biomedical and Health Informatics (BHI), October 2023, Pittsburgh, Pennsylvania, USA.

51. **Jasleen Kaur,** Arlene Oetomo, Gurjot Singh, Vivek Chauhan, and Plinio P Morita (2023), "Deep Learning Models to Forecast Indoor Temperatures in Heat Waves in Canada: An Exploratory Study Using Smart Thermostats", IEEE-BHI 2023: IEEE EMBS International Conference on Biomedical and Health Informatics (BHI), October 2023, Pittsburgh, Pennsylvania, USA.

52. Kang Wang, Shi Chao, **Jasleen Kaur,** Moojan Ghafurian**,** and Plinio P Morita (2023), "Healthy Aging in Place - Heart Rate Prediction with Ambient Assisted Living Technology Using Machine Learning", IEEE-BHI 2023: IEEE EMBS International Conference on Biomedical and Health Informatics (BHI), October 2023, Pittsburgh, Pennsylvania, USA.

53. Shahan Salim, Irfhana Zakir Hussain, **Jasleen Kaur,** and Plinio P Morita (2023), "An Early Warning System for Air Pollution Surveillance: A Big Data Framework to Monitoring Risks Associated with Air Pollution", IEEE-BHI 2023: IEEE EMBS International Conference on Biomedical and Health Informatics (BHI), October 2023, Pittsburgh, Pennsylvania, USA.

Patents & IPR

1. SRN Reddy, **Jasleen Kaur** et al., Indian Patent has been published on **"System for building, customizing software and hardware interfaces of smart phone using Raspberry Pi"** via Application No: 249/DEL/2015. [Reply to first FER has been filed].
2. **Jasleen Kaur**, Neera Batra et al., Indian patent has been published on "IOT Based Traffic Monitoring and Control System for Smart Ambulance" via Application No. 201911018152 dated May 24th, 2019. [Published]
3. Neera Batra and **Jasleen Kaur,** Indian Patent has been published and application is in hearing on "A Traffic Aware Health Monitoring System Embedded in Smart Ambulance (THESA)" vide Application No. 3295/DEL/2013 dated November 8, 2013. [Reply to first FER has been filed].
4. Neera Batra, **Jasleen Kaur** et al., Indian patent has been published on "IOT Based Centralized Healthcare Infrastructure for Critical Patients" via Application No. 201911018148 dated May 24th, 2019. [Published]

Workshops & Short-Term Courses

1. Two-day hands-on workshop on "Introduction to Robotics", conducted by IIT Bombay in collaboration with e-Yantra project sponsored by MHRD, 4-5th Jan 2019- Attended.
2. National seminar on "BlockChain Technology", conducted at NITTTR, Chandigarh, 14 December, 2018- Attended.
3. 10th International Conference on Theory and practice of Electronic Governance (ICEGOV-2017) from 7th to 9th March 2017 – Attended.
4. Two days hands- on workshop on MySmartPhone Kit Training conducted by Mobility Research Forum, supported by Microsoft, 7th & 8th Jan 2016 – Attended.
5. One day hands-on workshop on Raspberry Pi and its interfaces for B. Tech students, 13 Feb 2016 at IGDTUW, Delhi- Resource person for conducting theory sessions.
6. One day hands-on workshop on Intel Galileo in collaboration with Intel for B. Tech and M. Tech students held on 01 March 2015 at IGDTUW, Delhi- Resource person in coordinating Lab Sessions.
7. Design contest on build my smart device held during tech fest of IGDTUW held on 27-28 March 2015 at IGDTUW, Delhi- Coordinator.
8. Design contest on Application Development Challenge held during tech fest of IGDTUW held on 27-28 March 2015 at IGDTUW, Delhi- Coordinator.
9. One day workshop on "Research Methodology and Tools", on 6th Nov 2015 at IGDTUW, Delhi- Attended.
10. Hackathon Event on 21st, November 2015 conducted at JSS Academy of Technical Education, Noida & funded by Microsoft Mobile Relations- Attended.
11. Workshop on "Ubiquitous Sensing on Effective Living" on 20th, November 2015 at IIIT, Delhi- Attended.
12. 3 months Task Based Training (TBT-2019) through e-yantra Lab setup initiative (eLSI), conducted by IIT Bombay in collaboration with e-Yantra project sponsored by MHRD, Government of India, 01/02/2019- 30/04/2019- Completed
13. 6 days Faculty Enablement Program (FEP) on "Lex based Foundation Program" held online using webinar platform conducted by Infosys Limited from 18th Jan to 25th Jan 2019- Participated.

14. 6 weeks Summer Training Program -8 on Build your own Smart Device at IGDTUW during 05 June to 14 July 2017 with the support from Microsoft, Intel & DIC-MHRD- Delivered expert sessions.
15. One Week hands–on workshop on Building Your Own SmartPhone for faculty at NITTTR, Chandigarh held during 16 to 20 May 2016 in collaboration with IGDTUW, Delhi & NITTTR, Chandigarh with support from Microsoft, Intel & DIC-MHRD- Delivered expert sessions.
16. 6 weeks Summer Training Program -7 on Build your own IoT Enabled Smart Device at IGDTUW during 06 June to 15 July 2016 with the support from Microsoft, Intel & DIC-MHRD- Delivered expert sessions.
17. One Week hands–on workshop on Builds My_ Smart Phone for faculty at NITTTR, Chandigarh held during 04 to 08 May 2015 in collaboration with IGDTUW, Delhi & NITTTR, and Chandigarh- Delivered expert sessions.
18. 6 weeks Summer Training Program -6 on Build your own Smart Device at IGDTUW during 15 June to 24 July 2015 in collaboration with Microsoft - Delivered expert sessions.