Dr. Puja Gupta

912-920 A Sudama Nagar ,Behind Gautam Ashram Indore, MP 452009 Mob: 9893470703
Email:pooja1porwal@gmail.com,pgupta@sgsits.ac.in

Summary of Skills and Experience [(2.8 yrs. Development +17.3 yrs. Teaching)]:

A Blend of Industrial Teaching experience. Strongly passionate to take up challenging tasks and Committed Academician for a variety of undergraduate, postgraduate courses.

Qualification:

- **Ph.D.** in Computer Science from **Rajiv Gandhi Proudyogiki Vishwavidyalaya ,**Bhopal on 27 Dec 2024.
- **M.E. (Honors)** Specialization Embedded Systems from SGSITS, Indore in 2004 with 81.13%.
- **B.E. (Honors)** Computer Science & Engg. from JIT, Borawan In 2002 with 77%.
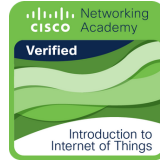- 10+2(HSC) Science & Math with 75% in 1998.

Skill Sets

- Internet of things (IoT), Machine Learning, Deep Learning, Image processing, AI and Soft Computing, Cloud Computing, Bigdata Analytics.

Teaching Experience:

1. Asst. Professor in Shri Govindram Seksaria Institute of Technology and Science, Indore, MP from **Dec 2007 to Current**

Subjects taught:

- Intelligent System [UG]
- Text and Image Analytics[PG]
- Big Data Analytics) for Postgraduate [PG]
- Cloud Computing for Undergraduate[UG], Post Graduate [PG]s
- Internet of Things (IoT) for Postgraduate [PG]
- Embedded System for both Postgraduate[PG] and Undergraduate[UG]
- Computer Organization & Architecture[UG]
- Data Structure & Operating System [UG]
- Programming Technique using Java for Undergraduate [U G]
- Introduction to Programming Language C for Undergraduate [U G]
- Soft Computing for Postgraduate [P G]
- Programming system using C for Postgraduate[P G]
- Application Programming Tool using Java for Postgraduate [PG]
- Computer Peripheral & Interface for Undergraduate [UG]
- Software Engineering for Undergraduate [UG]
- Digital System & Computer Architecture for Undergraduate [UG]
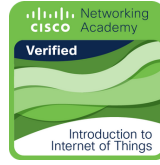- Computer Organization for Undergraduate [UG]

Projects under guidance:

1. Campus Sync[PG]
2. Legal Document management and commuication[UG]
3. Solar panel energy analysis and Fault detection[PG]
4. Blind Alert goggle device[PG]
5. IoT based Digital Stethoscope [UG]
6. Department Information System(MIS) [PG]
7. Kidney stone detection using CNN[UG]
8. Leaf disease detection using Deep Learning[UG]
9. Attendance system based on Face Recognition[UG]
10. An Efficient Human Face recognition system[PG]
11. Online Exam Procuring system [UG]
12. Attendance system based on Barcode[UG]
13. Vehicle number plate Identification system[UG]
14. Object Detection system based on IoT [PG]
15. Smart Healthcare Chair based on IoT[PG]
16. Smart Home Security System based on IoT{UG]
17. Attendance system based on App and Desktop [PG]
18. Soil Irrigation system based on IoT[PG]
19. Smart Parking system [PG]
20. Weather Forecasting System based on IoT[PG]
21. Color-based Robot for object picking and placing (PG)
22. Optimization in the heap Memory Utilization in RHE JVM (PG)
23. City bus Information system (UG)
24. Web Interface for BIND DNS Administration for DNS Registrar (UG)
25. Access & Management of Mobile Through PC using Bluetooth (UG)

Industry Experience:

From May 2005 to December 2007, I had been working as a **Senior Technical software Developer** with **AarogyaSoft, Indore,** since May 2005. Aayush, Medibest are the main products of our organization

Tools and other utilities developed for in-house usage:

1. Adding Bar Code feature in our Aayush HIS
2. Report creation tool for modules.
3. Atomization of Client Project Process.
4. Utility for Commenting Process.
5. Utility for Work Log entry.
6. Word Processor for Aarogyasoft (it shows Formatted data from Database).

7. Work management Web Application, developed for intranet.
8. Demonstration and training software for the Aayush application.
9. Utility for Validating Excel File.
10. Creation of our Deployment Wizard for Aayush Client, Application Server & Data Base Server
11. Create an image viewer for the scanned image
12. DICOM image viewer created in gtk [open source graphical user interface]
13. SMS utility for GSM modem
14. Aayush in-house mailing system
15. Database memory usage utility[it shows used memory, free memory in oracle database]
16. Database backup utility made for oracle
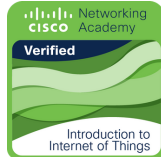
PATENT AND INVENTION DETAIL

Grant Patent

1. The patent entitled "**A SYSTEM FOR AUTOMATIC SEGREGATION OF WASTE MATERIALS**" Patent Application No: 202211007498 filled on 07/03/2022 and Grant on **16/03/2023**.
2. The patent entitled "**A SMART LIGHT POLE SYSTEM**" Patent Application No: 202211055093 filled on **26/09/2022** and Grant on **25/04/2023**.
3. The patent entitled "**A SYSTEM FOR DETECTION AND TRACKING OF SUSPICIOUS PERSON IN CROWD**" Patent Application No: 202021021517 Filled on 22 May 2020 and published on 23 June 2020 and the patent has been granted on 17 March 2021 from the Government of India.
4. The patent entitled "**A SMART VEHICLE**" Patent Application No: 202021030229 was filled on 15 July 2020 , Published on 22 August 2020 and Grant on 13/08/2021.

Published Patent

1. The patent entitled "**AI/ML BASED VEHICLE DIRECTION-ASSISTANCE SYSTEM**" Patent Application No: 202011032591 filled on 30 July 2020 and Published on 9 October 2020.
2. The patent entitled "**AN INTELLIGENT SYSTEM TO DETECTION COVID-19 PROTOCOL**" Patent Application No: 202021054175 filled on 13 December 2020 and Published on 15 January 2021.
3. The Australian patent entitled **"AUTOMATIC GUIDANCE SYSTEM FOR BLIND COMMUNITY"**, Application Number: 2021105880, Publication Date: 19-08-2021.

Product Installation

Developed 3 product Temperature detector and Sanitizing machine, Face mask detector system, UV Sanitizing Machine with my team and installed in pathology, Dr. Clinic, Vehicle service center, One-stop center (Government office).

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PROFESSIONAL CERTIFICATION

- NPTEL certification course on Python for data science with score of 77%. from Jan-Feb2025 session.
- MICROSOFT AZURE FUNDAMENTALS 2020 (AZ-900) Candidate ID:MS0989948081 with score 700 Registration :378790611 on 30 July ,2020
- ORACLE CLOUD INFRASTRUCTURE FOUNDATIONS 2020 Associate (1Z0-1085-20) Oracle Testing ID: OC2015801 With score 86% on 17 July 2020.
- SCRUM FOUNDATION PROFESSIONAL CERTIFICATE (SFPC) CP ID-TLSZVZQTHT-MMPMYPSY-RPFHTPHFLF with 89% on 12 June 2020.
- INTRODUCTION TO IoT CERTIFICATION from Cisco Networking Academy with scrore 94.4% on 7 April 2021.
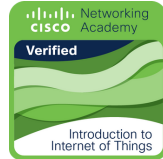
TECHNICAL SKILL

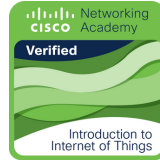| Operating System	Linux, Windows, Raspbian
Programming Language	C/C++/core Java/Vb.net/Python
Data Base	Oracle9i-10g, MS SQL Server 2000, Postgre,MSAcess
Scripting Language	ASP.net, VBscript, HTML.
New Technologies with Rapid Application Development tools (RAD)	.Net Platform using vb.net, Matlab 2019b
Assembly Language	For 68000 Microprocessor and 8051 Microcontroller,
Hardware Programming	VHDL Programming, Arduino (ATML8051) ,ARM Processor , NodeMCU

PROJECT DONE DOURING BE AND ME:

- Development of 68HC000FN16 Microprocessor based CPU Card for VME Bus developed and used in RRCAT Indus lab Indore 2004.
- Online Student Information system (J.I.T.) College Site2002.
- Clinic Management System developed for For: Dr Amitabh Goyal (Heart surgeon & Gyanocolist), T-Choithram, Indore 2002.
- Learner Management System developed for N.S.R.C. India (National Saksharta Registrar Centre) Sudama Nagar, Indore 2002.
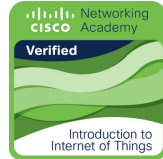
RESEARCH & PUBLICATION

Dr. Puja Gupta

1. Publish paper in **Scopus** Journal Multimedia Tools and Applications, 2025•Springer Title "**Evaluation of several yolo architecture versions for person detection and counting**" Feb 2025

2. Publish paper in **Scopus** Journal Africal journal of Biological Science 6 (Special Issue - 4 (2024)), 105 Title "**Agricultural Internet of Things (AIoT) for Intelligent Farming**" April 2024

3. Publish paper in **Scopus** Journal International Journal of Intelligent Systems and Applications in Engineering, Title "**Brain Tumor Segmentation and Detection using EfficientNetB3 Model for MRI Medical Images**" April 2024.

4. Publish paper in **Scopus** Journal Intelligent Sensor Node-Based Systems, Title "**Intelligent Security System Based on the Internet of Things (IoT)**" October 2023.

5. Publish paper in Scopus Journal Intelligent Sensor Node-Based Systems, Title "**IoT-Based Smart Chair for Healthcare Supporting System**" October 2023.

6. Publish paper in SCI journal Concurrency and Computation: Practice and Experience Title "**Acknowledgment of patient in sense behaviors using bidirectional ConvLSTM**" September 2023.

7. Publish paper in Conference Title "**Study on the NB-IoT Based Smart Medical System**" 2023 3rd International Conference on Advance Computing and Innovative .

8. Publish paper in Scopus Journal Intelligent Sensor Node-Based Systems, Title "**Internet of Things and robotics: a review of concept, added value and applications** " October 2023.

9. Publish paper in Scopus journal IET Digital Library Title "**Internet Smart and of Intelligent Things in Healthcare Systems**" July 2023.

10. Publish paper in Scopus journal NeuroQuantology 20 (16), 5012-5029Title "**A Face Mask Identification System based on the Internet of Things and Machine Learning for Detecting Covid-19**" November 2022.

11. Publish paper in Scopus journal 2022 4th International Conference on Inventive Research in Computing Applications (ICIRCA) Title "**An Algorithm for Counting People using Dense Nets and Feature Fusion**" November 2022.

12. Publish paper in Scopus AIP Conference Proceedings 2597 (1) Title "**DEEPCNN: A novel approach of multi view face recognition**" December 2022.

13. Publish paper in Scopus journal 2022 International Conference on Automation, Computing and Renewable Systems Title "**Analysis of Crowd Features based on Deep Learning**" December 2022.

14. Publish paper in **Scopus** Journal Challenges in the adaptation of IoT technology. A Fusion of Artificial Intelligence and Internet of Things for Emerging Cyber Systems, pp.347-369, Title "**Challenges in the adaptation of IoT technology**" April 2022.

15. Publish paper in Scopus journal 2022 International Conference on Automation, Computing and Renewable Systems Title "**Analysis of CNN Model with Traditional Approach and Cloud AI based Approach**" December 2022.

16. Publish paper in Scopus International Journal of Innovative Research in Engineering Title "**Machine Learning-based Movie Recommendation Engine**" 2022.

17. Publish paper in Scopus journal Autonomous Vehicles Volume 1: Using Machine Intelligence, 149-159 Title "**Traffic Management for Smart City Using Deep Learning**" December 2022.

18. Publish paper in International Conference on Cybersecurity in Emerging Digital Era, 59-68, 149-159 Title "**Digital and IoT Forensic: Recent Trends, Methods and Challenges**" December 2022.

19. Publish paper in Scopus journal NeuroQuantology 20 (16), 5012-5029Title "**The impact of artificial intelligence on renewable energy systems**" December 2022.

20. Publish paper in Scopus journal i-manager's Journal on Pattern Recognition Title "**An AI-Based Online Exam Proctoring Framework**" August 2022.

21. Publish paper in Scopus journal i-manager's Journal on Pattern Recognition Title "**A Study of the Automated Vehicle Number Plate Recognition System**" November 2022.

22. Publish paper in Elsevier SCI journal Journal of Intelligent & Fuzzy Systems, 1-16 Title " **Activity detection and counting people using mask-RCNN with bidirectional ConvLSTM**" September 2022.

23. Publish paper in Elsevier SCI journal Expert System & Applications Title "**A Novel Algorithm for Mask Detection and Recognizing Actions of Human**" March 2022.

24. Publish paper in Springer Nature Scopus Journal Title "**Let the Blind See: An AIIoT based device for real-time object recognition with the voice conversion**" Jan 2022

25. Publish paper in Scopus journal International Journal of Progressive Research Title "**A Review of Friend Recommendation on Social Media**" February 2022.

26. Publish paper in Scopus journal International Journal of Progressive Research Title "**Friend Recommendation on Social Media using Clustering Technique**" March 2022.

27. Publish paper in Scopus journal International Journal of Science, Engineering and Technology Title "**The Cloud: Features, Challenges & Scope**" January 2022.

28. Publish paper in Scopus journal AFRICAN DIASPORA JOURNAL OF MATHEMATICS ISSN: 1539-854X UGC CARE GROUP I 24 Title "**AIIoT-Enabled Soil Irrigation System**" January 2022.

29. Publish paper in Elsevier Scopus journal Title "**People detection and counting using YOLOv3 and SSD models** ".January 2021

30. Participate and delivered Oral Presentation entitled "**An Intelligent system to detect covid-19 Protocol**" in Young Scientists Conference during 22 December2020 as a part of India International Science Festival-2020.

31. Publish paper in Elsevier Scopus journal Title "**Machine learning approaches for IoT-data classification** "Proceedings of the International Conference on Innovative Computing January 2020

32. Publish paper in 2019 International Conference on Issues and Challenges in Intelligent Title "**A Survey on Multi-objective based clustering techniques for solving real life problems** " March 2019.

33. Published paper in Conference on "**Paradigm Shift in Innovative Business Management**" held on Dec2010 "Technological aspect of a Massive Open Online Course: The Case of Coursera and its effects".

34. Published paper at International Journal of Latest Trends in Engineering and Technology
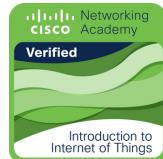
(IJLTET)" **An Introduction of Soft Computing Approach over Hard Computing**".

35. Published paper at International Journal of Latest Trends in Engineering and Technology (IJLTET)" **An Embedded Health Care Supervisory Systems**".

36. Published paper at PARIPEX - INDIAN JOURNAL OF RESEARCH with title "**Design of sinusoidal Oscillator using Second generation current conveyor**"

ORGANIZED EVENTS

1. Coordinate a Technical Exhibition NexTech on Science day 28th Feb 2025 at the institute level.

2. Coordinator for a 10 days Faculty development Program (FDP) on Career counseling in association with crisp India from 10-20 Jan 2025.

3. Organized a three-day workshop on "Data Science using Python" for MCA students on February 14-16, 2024, with the coordination of Mind Coder.

4. Technical Coordinated the Webinar on "MYSTERIES OF EARTH'S MOON THROUGH INDIAN LUNAR MISSIONS "by Dr. Prakash Chauhan organized by the Indian Society of Remote Sensing Indore chapter and technical support provided by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 11th-Aug-2020.

5. Coordinated the International Webinar on "FIGHTING THE LOCKDOWN BLUES" by Dr. Vikrant Singh Tomar organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 8th-Aug-2020.

6. Organizing Committee Member & Coordinator One Week Workshop on "The Growing Role of IoT in Latest Technological Trends" by Dr. Shriram K. Vasudevan organized by School of Information Technology (SoIT), Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), and Bhopal (M.P.) on 22th-26thJune-2020.

7. Coordinated the Webinar on "Machine Learning and Digital Twins using Embedded AL and tiny ML" by Prof. Raj Kamal organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 19th-June-2020.

8. Coordinated the Webinar on "Blockchain" organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) association with Wiley on 12th-June-2020.

9. Coordinated the three-day workshop on "The Growing role of IoT in Covid-19 and Healthcare" organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) association with Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal on 08th-10th-June-2020.

10. Coordinated the Webinar on "Recent Research in Speech Processing with a Demo of Products Developed" organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) association with Wiley on 03rd-June-2020.

11. Coordinated the Webinar on "Exponential Technologies in Education" by Prof. PK Chande organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 01st-June-2020.
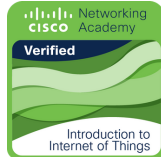
12. Coordinated the Webinar on "Machine Learning" by Dr. Anuradha Srinivasaraghava Jointly organized by WILEY & Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 19th-May-2020.

13. Coordinated the Webinar on "CYBERSECURITY DURING COVID-19" BY ADGP (Dr. Varun Kapoor) organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 16th-May-2020.

14. Coordinated the Webinar on "Living the Lockdown Philosophy" organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 14th-May-2020.

15. Coordinated the Webinar on "Impacts on COVID-19" by Dr. Sanjay Khator (MD-Pulmonology), Tata Memorial Hospital, Jamshedpur organized by Department of Information Technology, Shri G.S. Institute of Technology & Science, Indore (M.P.) on 03th-May-2020.

16. Coordinated three-day workshop on "Deep Learning, Java Stack & Data Analytics" sponsored by Wiley Publication, held at SGSITS, Indore, during 15-17 February 2020.

17. Coordinated one-week FDP on "Databases and Algorithms" sponsored by Electronics and ICT Academy PDPM IIITDM Jabalpur, held at SGSITS, Indore, during 26-30 December 2019.

18. Coordinated one-week FDP on "Introduction to Machine learning and Data Engineering" sponsored by Electronics and ICT Academy PDPM IIITDM Jabalpur, held at SGSITS, Indore, during 20-25 December 2019.

ATTENDED/PARTICIPATED IN FDPs/SHORT TERM COURSES/FACULTY TRAINING

1. Participated and completed a one-week STTP on "Big Data and Hadoop "organized by the Department of computer science & Engineering IPS Indore from 20th-25th July 2020.
2. Participated in and completed a Three-day workshop on "Machine Learning "organized by the Department of Information Technology SGSITS Indore.
3. Participated in and completed a one-day workshop on "Big data Analysis "organized by the Department of Information Technology SGSITS Indore.
4. Participated and completed a Two-week FDP on "DBMS "organized by the Indian Institute of Technology (IIT) Bombay.
4. Participated and completed Three-day FDP on "AAKASH "organized by the Indian Institute of Technology (IIT) Bombay.
5. Participated in and completed a Two-week FDP on "Introduction to programming language "organized by the Indian Institute of Technology (IIT) Bombay.
6. Participated in and completed a Two-week FDP on "Design of Algorithm "organized by the Indian Institute of Technology (IIT) Bombay.
7. Participated in and completed a Two-day workshop on "Recent Trend & Technology in computer "organized by the Indian Institute of Technology (IIT) Bombay.
8. Participated in and completed a Three-day workshop on "Effective Teaching Methodologies "organized by the Indian Institute of Technology (IIT) Bombay.
9. Participated in and completed a one-week FDP on "Effective Teaching Methodologies for faculty "organized by the Indian Institute of Technology (IIT) Bombay.

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EXPERT LECTURE AND KEYNOTE SPEAKERS

- As a recognized Resource Person in the Faculty Induction Programme (Guru Dakshata) held from the 2nd to the 31st of December 2024, I delivered a Keynote lecture on the topic **'Impact of IoT in Real Life'** on December 16th, 2024. Organized by the Malaviya Mission Teacher Training Centre, Indira Gandhi National Tribal University, Amarkantak (MP).
- As a recognized Resource Person in the 'Faculty Induction Programme (Guru Dakshata)' held from 01.11.2024 to 30.11.2024, I delivered a Keynote lecture on the topic "The Impact of ICT-Enabled Teaching and Learning on the Education System" on November 20th, 2024. Organized by the Malaviya Mission Teacher Training Centre, Indira Gandhi National Tribal University, Amarkantak (MP).

PRIZES/MEDALS/AWARDS/EXTRACURRICULAR ACTIVITIES

- Serve as a reviewer for five SCI journals, as well as for numerous book chapters, conferences, and scopus articles.
- Since 2021, served as editor of the "Glimpse of IT" department newsletter.
- Received the Nayika Award on March 8, 2022, from the Indore Collector and IPS Officer, Mrs. Pratibha Pal.
- Qualified **GATE** –2002 in Computer Science subjects.
- Best Student Award from the Association of Computer science & Engg. Department J.I.T. BORAWAN.
- College Topper Award & Symbol of Best Student from J.I.T. College.
- First position in Senior General Knowledge & Intelligence Test & Certificate, conducted by Central Institute of General Knowledge Learning, Delhi.
- Senior Member of Association of Computer Science & Engg. (J.I.T. BORAWAN) selected on basis of merit (Academic Record)
- Finalist of (inter-college) Badminton competition conducted at J.I.T. Campus.

Personal:

Date of Birth	23 Jan 1983
Citizenship/Nationality	Indian
Gender	Female
Email-Id	pooja1porwal@gmail.com(Preferred),pgupta@sgsits.ac.in

I hereby state that the information given by me above is true to the best of my knowledge and belief.

(Dr. Puja Gupta)