# UDIT DEO

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## RESEARCH & ACADEMIC SNAPSHOT

- **Research Interests**: Computer Vision, Deep Learning, Machine Learning, Soft Computing, Fuzzy Optimization, Decision Systems.

- **Academic Foundation**: Currently pursuing Ph.D. in Computer Science and Engineering (IIT Roorkee); M.Tech in Software Engineering with a GPA OF 9.53 (MANIT Bhopal) and B.Tech in Computer Science and Engineering with a GPA of 8.21 (SMVDU), recipient of a merit-based tuition waiver for academic performance

- **National Level Exams**: Qualified UGC-NET JRF in CS(087); GATE qualified in CS and DA

- **Industry Experience**: 2 years at Amdocs Development Center with cross-domain exposure; recognized in innovation contests and internal awards

- **Research Output**: Three international conference publications - two Scopus-indexed (IEEE CICTN 2025, IEEE ICCCNT 2025) and one zbMATH-indexed (Springer ICAIA 2025)

## EDUCATION

**Indian Institute of Technology Roorkee** — Roorkee, UK
PhD in CSED under guidance of Prof. R. Balasubramanian — July 2025 - Present

- **Relevant Coursework**: Essential Mathematics for AI, Concepts of Artificial Intelligence and Machine Learning, Advances in Signal and Image Processing

**Maulana Azad National Institute of Technology** — Bhopal, MP
MTech in Software Engineering *GPA: 9.53* — Aug 2023 - June 2025

- **Relevant Coursework**: Applied Mathematical Analysis, Machine Learning, Neural Networks and its Applications, Deep Learning, Data Science and Analytics, Data Warehousing and Data Mining, Cloud Computing using IoT, Research Methodology

- **M.Tech Thesis:** *Bridging Fuzziness and Optimization: Frameworks for Relation Inequalities and Multi-Criteria Decision Systems*
Guide: Prof. MMS Beg (ZHCET, AMU) and Dr. JK Jain (MANIT Bhopal)

**Shri Mata Vaishno Devi University (GFTI)** — Reasi, J&K
BTech in Computer Science and Engineering *GPA: 8.21* — July 2017 - June 2021

- **Relevant Coursework**: Data Structures and Algorithm, Programming Languages, Theory of Computation, Compiler Design, Engineering Mathematics, Discrete Mathematics, Operating System, DBMS, Digital Logic, Computer Networks, Computer Organization and Architecture

- **Tuition Fellowship**: Ranked 2nd in department (7th semester); awarded tuition waiver for academic excellence

## INDUSTRY EXPERIENCE

**Amdocs Development Center** — Gurugram, HR
*Associate Software Engineer* — July 2021 - June 2023

- Worked on **billing modules** (BFENV, ODI, Splitter, Archive) using **C/C++** in a **Unix environment**

- Developed an automated **Python tool** for **backward compatibility** of **binary and ASCII files**, reducing manual effort by **90%**

- Designed a **Python-based database comparator & merger tool**, enabling efficient **synchronization** between database instances

- Implemented a **Flask-based Regression Testing Tool**, streamlining **testing processes** and enhancing **collaboration**

- Recognized at Amdocs for excellence in **innovation**, **coding**, **automation**, and **sports competitions**

## Conferences and Publications

**CICTN 2025 IEEE International Conference, Ghaziabad, India**
Udit Deo, et al., "Advances in Fuzzy Relation Inequalities and Optimization Techniques", *IEEE CICTN 2025 (IEEE Xplore, Scopus Indexed) DOI:https://doi.org/10.1109/CICTN64563.2025.10932336*

**ICAIA 2025 Springer International Conference, Delhi, India**
Udit Deo, et al., "A New Approach to Fuzzy Relation Inequalities: Effects of Variable Absence and Weighted Composition", *Springer ICAIA 2025 (Under Publication, forthcoming in Algorithms for Intelligent Systems book series, zbMATH Indexed)*

**ICCCNT 2025 IEEE International Conference, Indore, India**
Udit Deo, et al., "Robust Client-Server Quality Allocation via Ordered Weighted Averaging: A Multi-Objective Optimization Framework", *IEEE ICCCNT 2025 (Under Publication, forthcoming in IEEE Xplore, Scopus Indexed)*

## Patent

**Title:** A Device for Producing Electricity Using Roof Air Ventilator
**Design No.:** 440258-001 — *Granted by IP India under the Designs Act, 2000 (Class 13-01)*
**Date of Issue:** 07 April 2025
**Inventors:** Dr. Anand Kumar, Ayush Kumar Agrawal, Uday Deo, **Udit Deo**, Shashank Kumar Soni, Bikramaditya Chakraborty, Basundhara Singhdeo

## National-Level Competitive Examinations

**UGC-NET (Computer Science & Applications)** NTA

- **Junior Research Fellowship (JRF)** in Dec **2024**

- Qualified for **Assistant Professor** in June **2024**

**GATE (Graduate Aptitude Test in Engineering)** IIT/IISC

- **Computer Science (CS)** - *Qualified* in **2022** and **2025**

- **Data Science & Artificial Intelligence (DA)** - *Qualified* in **2025**

## Technical Skills

- **Languages:** C, C++, Python, Shell
- **Libraries:** PyTorch, TensorFlow, OpenCV
- **Computer Vision:** YOLO, ResNet, MobileNetSSD, Transfer Learning
- **Tools:** Git, GDB, Unix/Linux, LaTeX