

# Sandeep Kumar Patel

+91 9415143508 • sandeep.pmg61@gmail.com • Google Scholar

## Work Experience

- **Senior Research Scholar**, Indian Institute of Technology, Patna, India Aug 2020 – Present
  - Researcher in Computer Vision and Time Series
  - Detected Anomaly in time series data.
  - Detected Anomaly in Videos.
  - Teaching Assistant for the Foundations of Deep Learning , Machine Learning, Compiler Design and Data structure.
- **Assistant Professor**, Netaji Subash Institute of Technology, Bihta Patna, India July 2023 – June 2025
  - Teaching
    - Compiler Design, Formal Language and Automata Theory,
    - Design and Analysis of Algorithms , Data Structures
    - Cloud Computing, Big Data Analytics
  - Administrative Responsibilities
    - Test Coordinator Aug 2023 – Dec 2023
    - Project Coordinator (B.Tech 4th Year) Jan 2025 – July 2025
- **Project Fellow, IIT Patna R&D**, sponsored by MHA, Government of India Aug 2020 – March 2022
  - Designed CLI and GUI based obscene context detection, which **detects obscenity in the video**
  - Model also **detects presence of individuals including children in the video**
  - Model extracts **important frames** to find out Age and Gender of individuals.
  - Model localizes the **six- locations** as obscene.
  - The model is **deployed on web server and linux server**. It takes less than **a minute to process large videos**.

## Internship

- **Network Engineering Intern (CCNA: Routing and Switching)** May 2016 – July 2016  
[Live wire], [Varanasi, India]
  - Gained practical experience in configuring Cisco routers and switches using CLI.
  - Worked with routing protocols including RIP and OSPF for dynamic routing.
  - Used Cisco Packet Tracer to simulate, design, and troubleshoot network topologies.
  - Familiar with OMNeT++: Used for simulating communication networks, protocols, and distributed systems.

## Education

- **Indian Institute of Technology Patna (IITP), India** July 2020 - Present  
**Doctor of Philosophy**, Computer Science and Engineering  
Thesis Title: Interpretable Deep Learning Framework for Anomaly Detection with Adaptive Thresholding.
- **National Institute of Technology Jalandhar (NITJ), India** July 2018 - June 2020  
**Master of Technology**, Computer Science and Engineering  
Thesis Title: Task-Scheduling using Hybrid Meta-heuristics Algorithms in Cloud  
CGPA: 8.35/10
- **Dr. Abdul Kalam Technical University Lucknow, India** July 2013 - June 2017  
**Bachelor of Technology**, Computer Science and Engineering  
Project Title: Online Blood Donation Management System  
Percentage: 82.41/100

## Publications

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### Journals:

1. **SK Patel**, A Mondal, *Robust Masked Face Recognition Using Unmasked Training Data: A Generalization-Based Approach* (Under Review).
2. **SK Patel**, J. Kumari, A Mondal, *Interpretable Anomaly Detection in Multivariate Time Series via Feature Attribution* (Under Review).

### Conferences:

1. **SK Patel**, A Singh , *Task scheduling in cloud computing using hybrid meta-heuristic: A review*, Proceedings of the International Conference on Paradigms of Communication, Computing and Data Sciences: PCCDS 2021, [https://link.springer.com/chapter/10.1007/978-981-15-7533-4\\_35](https://link.springer.com/chapter/10.1007/978-981-15-7533-4_35).

## Technical Skills

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- **Skills:** Python, C, C++
- **Frameworks:** TensorFlow, Keras, Pytorch, Tableau, Power BI
- **Libraries:** Numpy, Pandas, cv2, Dlib
- **Databases :** MySQL, SQL
- **Dev Tools:** Visual Studio Code, Git, Docker

## Recognition and Achievement

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- **Presented** research paper in PCCDS -2021 "*Proceedings of the International Conference on Paradigms of Communication, Computing and Data Sciences*", organized by National Institute of Technology, Kurukh, India.
- **Qualified** GATE – 2018 & UGC-NET (Jun – 2019, Dec – 2019) and UGC-NET (Jun – 2023, Dec – 2023) .

## References

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Name	Position	Affiliation	Email
Dr. Jimson Mathew	Professor	Indian Institute of Technology Patna	jimson@iitp.ac.in
Dr. Arijit Mondal	Asst. Professor	Indian Institute of Technology Patna	amondal@gmail.com

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