

Kiran Purohit

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Google Scholar, Research Gate

EDUCATION

Indian Institute of Technology Kharagpur

Ph.D., Dept. of Computer Science and Engineering

Advisor: Prof. Sourangshu Bhattacharya

West Bengal, India

2020–2025

National Institute of Technology Durgapur

M.Tech, CGPA: 9.15/10

West Bengal, India

2018–2020

THDC-IHET

B.Tech, Percent: 75.9

Uttarakhand, India

2013–2017

Kendriya Vidyalaya Faridkot

12th Science, Percent: 84.4

Punjab, India

2012–2013

Kendriya Vidyalaya Sukna

10th, CGPA: 9.6/10

West Bengal, India

2010–2011

EXPERIENCE

Indian Institute of Technology Kharagpur

Teaching Assistant

- Mentored B.Tech and M.Tech students in Term Projects

West Bengal, India

Dec 2020 - Current

National Institute of Technology Durgapur

Teaching Assistant

- Helped B.Tech students in Lab assignments

West Bengal, India

Jul 2019 - Jun 2020

Defence Research and Development Organisation (DRDO)

Trainee

- Developed Network Docket Management System
a website for automation of complaints registered.

Uttarakhand, India

Jun 2016 - Jul 2016

SCHOLARSHIPS & AWARDS

- | | |
|---|-----------|
| • Prime Minister's Scholarship Scheme for CAPF & Assam Rifles | 2013–2017 |
| • BSF Director General's Merit Scholarship | 2013–2014 |
| • MHRD Gate Scholarship | 2018–2020 |
| • Institute Fellowship for PhD | 2020–2025 |
| • AI4ICPS Chanakya PhD Fellowship | 2024–2025 |

TECHNICAL SKILLS

- **Programming Languages:** C, C++, Python, Java, PHP, ASP
- **Deep Learning Libraries:** Pytorch, Tensorflow
- **Database Management tools:** MySQL, Oracle
- **Big Data Management:** Pyspark

PUBLICATIONS

- [1] **K. Purohit**, S. Das, S. Bhattacharya, and S. Rana, “Learn defend: Learning to defend against targeted model-poisoning attacks on federated learning”, in *arXiv preprint arXiv:2305.02022*, 2023 (Submitted).
- [2] **K. Purohit**, A. Parvathgari, and S. Bhattacharya, “A greedy hierarchical approach to whole-network filter-pruning in cnns”, 2024 (Submitted).
- [3] **K. Purohit**, Raghuram, Krishna, Venkatesh, S. Bhattacharya, and A. Anand, “Robust and efficient exemplar selection for in-context learning”, 2024 (Submitted).
- [4] **K. Purohit**, A. Parvathgari, S. Das, and S. Bhattacharya, “Accurate and efficient channel pruning via orthogonal matching pursuit”, in *Second International Conference on AI-ML Systems (AIMLSystems 2022)*, 2023, ISBN: 978-1-4503-9847-3.
- [5] **K. Purohit**, A. Kesarwani, D. Ranjan Kisku, and M. Dalui, “Covid-19 detection on chest x-ray and ct scan images using multi-image augmented deep learning model”, in *Proceedings of the Seventh International Conference on Mathematics and Computing*, Singapore: Springer Nature Singapore, 2022, pp. 395–413, ISBN: 978-981-16-6890-6.
- [6] **K. Purohit**, O. Iqbal, and A. Mullick, “Reproducibility report: Contextualizing hate speech classifiers with post-hoc explanation”, in *arXiv preprint arXiv:2105.11412*, 2021.
- [7] A. Kesarwani, **K. Purohit**, M. Dalui, and D. R. Kisku, “Measuring the degree of suitability of edge detection operators prior to an application”, in *2020 IEEE Applied Signal Processing Conference (ASPCON)*, 2020, pp. 128–133.

TEACHING

- **Teaching Assistant** at IIT Kharagpur-Virginia Tech 2023-2024
IIT KGP-VT Joint Certification Program In Business Analytics and AI
- **Teaching Assistant** at IIT Kharagpur Autumn 2023, 2022 & 2021
Scalable Data Mining (CS60021)
- **Teaching Assistant** at IIT Kharagpur Spring 2024 & 2023
Software Engineering Lab & Theory (CS29202)
- **Teaching Assistant** at IIT Kharagpur Spring 2022
Foundations of Algorithm Design and Machine Learning (FADML)
- **Teaching Assistant** at IIT Kharagpur Spring 2021
Programming & Data Structures Theory (CS10003)

TRAINING & WORKSHOPS

- Attended Indian Symposium on Machine Learning (IndoML) 2023, 2022, 2021 by IIT Gandhinagar.
- Attended Amazon Research Days 2021

- Attended TEQIP-III Sponsored one week Short Term Course at NIT Durgapur on Recent Trends in Machine Learning for Computer Vision and Image Analysis.
- Underwent 6 weeks industrial training on Network Docket Management System from DEAL-DRDO, Dehradun
- Underwent 40 hours CCNA training from Cetpa, Dehradun at THDC-IHET.
- Underwent 2 days Android workshop in THDC-IHET.
- Completed 1-month Advance Java course from Unisoft, Dehradun.
- Completed 1-month J2EE course from Unisoft, Dehradun.

POPULAR / NEWS ARTICLES / MEDIA COVERAGE

- “COVID-19 Detection on Chest X-Ray and CT Scan Images Using Multi-image Augmented Deep Learning Model”, Genomics & Precision Health Database — the Genomics & Health Impact Weekly Scan — PHGKB, Jul 2020. Our paper got enlisted in the **Centers for Disease Control & Prevention** under the US Department of Health.
- COVID-19 Detection, Daily Newsletter Provides COVID-19 Literature Situation Report — University of Washington-Department of Global Health, Jul 2020. Our work was featured in the Daily Newsletter of the **Department of Global Health, University of Washington**.
- Our “COVID-19 Detection on Chest X-Ray and CT Scan Images Using Multi-image Augmented Deep Learning Model” article was published in **Medium.com**.

EXTRACURRICULAR ACTIVITIES & ACHIEVEMENTS

- Gold winner in English Debate, English Essay Writing and Hindi Extempore Speech.
- Silver winner in English Debate and Quiz Competition.
- Bronze winner in Science Quiz Competition, Sanskrit Shloka Recitation, Calligraphy Competition, Hindi Essay Writing, Mono Acting Competition and Group Song Competition.
- Yoga, Swimming and Table Tennis enthusiast

REFERENCES

- Dr. Sourangshu Bhattacharya, Associate Professor in Computer Science and Engineering, IIT Kharagpur, sourangshu@cse.iitkgp.ac.in
- Prof. Saurabh Bagchi, Professor in ECE , Founding Director of CRISP, Founding Director of Army A2I2, Director of ECE Corporate Partnerships, Purdue University, sbagchi@purdue.edu
- Dr. Avishek Anand, Associate Professor in the Software Technology, TU Delft, Avishek.Anand@tudelft.nl
- Dr. Santu Rana, Associate Professor in Computer Science, Deakin University, Australia, santu.rana@deakin.edu.au
- Dr. Dakshina Ranjan Kisku, Associate Professor in Computer Science and Engineering, NIT Durgapur, drkisku@cse.nitdgp.ac.in
- Mr. Ravi Shanker Sharma, Scientist-D in DEAL-DRDO, Dehradun, ravisharma@deal.drdo.in