



Akash Ghosh

Doctoral Reseecher
in Artificial Intelligence
Indian Institute Of Technology, Patna

+91-8837461657
akash_2321cs19@iitp.ac.in

linkedin.com/in/akash-ghosh-4b199811a/

EDUCATION

| Degree | Institute/Board | Grade | Year |
|------------------------|--|-------------|---------------------|
| PhD | Indian Institute of Technology, Patna | 9.50 (CGPA) | 2023-2027(expected) |
| Master of Technology | Indian Institute of Technology, Ropar | 7.34(CGPA) | 2020-2022 |
| Bachelor of Technology | National Institute of Technology, Agartala | 7.85(CGPA) | 2015-2019 |
| Senior Secondary | Sri Krishna Mission School, Agartala | 83.6% | 2015 |
| Secondary | Udaipur English Medium H.S School,Udaipur | 86.3% | 2013 |

EXPERIENCE

- **Visiting Researcher, MBZUAI** August 2025 - February 2026
Guide: Prof Salman Khan and Prof Xiuying Chen
Masdar City, Abu Dhabhi
– Working on problems related to medical safety and reasoning. Work accepted in CVPR Findings 2026 and ACL Main 2026
- **Research Intern, University of Virginia(Remote)** Nov 2024 -
Guide: Prof Chirag Agarwal
Charlottesville, Virginia
– Working on problems related to multilingual reasoning and trustworthiness. Work got accepted in EMNLP 2025 and submitted in ICML 2026(Average Score:4).
- **Research Intern at Adobe** May 2024 - August 2024
Guide : Dr Aparna Garimella and Dr Sambaran Bandopadhyay
Banglore, Karnataka
– Worked on a novel problem statement on Generating Complex Statistics from Documents, Work accepted at ACL 2025
- **Junior Research Fellow at IIT Patna** Jan 2023 - June 2023
Guide: Dr.Sriparna Saha
Bihar, Patna
– Worked on a project Named ClipSyntel: CLIP and LLM Synergy for Multimodal Question Summarization in Healthcare(Current status:Accepted AAAI 2024)

RESEARCH PAPERS

- **CLIPSyntel: CLIP and LLM Synergy for Multimodal Question Summarization in Healthcare** arXiv
Status: Accepted in AAAI 2024
- **MedSumm: A Multimodal Approach to Summarizing Code-Mixed Hindi-English Clinical Queries** arXiv
Status: Accepted in ECIR 2024
- **From Sights to Insights: Towards Summarization of Multimodal Clinical Documents** ACL
Status: Accepted in ACL 2024
- **HealthAlignSumm: Utilizing Alignment for Multimodal Summarization of Code-Mixed Healthcare Dialogues** IBM
Status: Accepted in EMNLP Findings 2024
- **Infogen: Generating Complex Statistical Infographics from Documents** OpenReview
Status: Accepted in ACL 2025
- **SANSKRITI: A Comprehensive Benchmark for Evaluating Language Models' Knowledge of Indian Culture** OpenReview
Status: Accepted in ACL Findings 2025
- **Let's Play Across Cultures: A Multilingual Multicultural Sports Benchmark** EMNLP
Status: Accepted in EMNLP 2025[Oral]
- **A Comprehensive Survey of Hallucination in Large Language, Image, Video and Audio Foundation Models** arXiv
Status: Accepted in EMNLP Findings 2024
- **The Multilingual Mind: A Survey of Multilingual Reasoning in Language Models** arXiv
Status: Accepted in EMNLP Findings 2025
- **DRISHTIKON: A Multimodal Multilingual Benchmark for Testing Language Models' Understanding on Indian Culture** arXiv
Status: Accepted in EMNLP 2025
- **RELIC: Enhancing Reward Model Generalization for Low-Resource Indic Languages with Few-Shot Examples** arXiv
Status: Accepted in EMNLP Findings 2025
- **M3Retrieve: Benchmarking Multimodal Retrieval for Medicine** EMNLP
Status: Accepted in EMNLP 2025
- **CLINIC: Benchmarking Multilingual Trustworthiness for Language Models in Healthcare** ICML
Status: Submitted in ICML 2026 (Average Score :4)
- **MedGazeShift: Transferable Multimodal Adversarial Attacks for Diagnostic Misdirection in Vision-Language Models** ACL
Status: Accepted in ACL 2026 (Oral),2026
- **RADO: Trustworthy Radiology Impression Generation Using Safety and Faithfulness-Based Preference Optimization** arXiv
Status: Accepted in ACM Transactions on Computing for Healthcare
- **Exploring the Frontier of Vision-Language Models: A Survey of Current Methodologies and Future Directions** arXiv
Status: Available on arXiv

- **A Survey on Medical Document Summarization: From ML Techniques to Large Language Models** *ResearchSquare*
Status: Accepted in WIREs Data Mining and Knowledge Discovery
- **IndicMedQA: Multimodal Medical Query Analysis in Indian Languages** *ACM Health*
Status: Submitted to ACM Transactions on Computing for Healthcare , Preprint available on request .
- **Towards Developing a Small and Safe Language Model for Veterinary Science through VetLM** *Npj*
Status: Submitted to npj Veterinary Science
- **CarePilot: A MultiAgent Framework for Long-Horizon Task Automation in Healthcare** *CVPR*
Status: Accepted to CVPR Findings 2026
- **CURE-Med: Curriculum-Informed Reinforcement Learning for Multilingual Medical Reasoning** *ACL*
Status: Accepted in ACL 2026 (ORAL)
- **ArogyaSutra: A MultiAgent Framework for Multimodal Medical Reasoning in Indian Languages** *IJCAI*
Status: Submitted to IJCAI (Got an accept recommendation from SPC during rebuttal)

PROJECTS

- **Text2MCQ:Creating MCQs from passages using AI** *Dec 2021 - May 2021*
Guide: Dr.Narayanan C Krishnan **Github**
 - • Used Multipartite keyPhrase Extraction Algorithm to extract keywords from the passages and keep the top 4 keywords which are present both in summarized(Use T5 for summarization) and original passages. • Using passages and Keywords as input we use T5 model to generate questions from the passages.We create a question for each corresponding keyword extracted. • We use Sense2vec algorithm to extract distractors corresponding to the keywords and to filter the generated distractors we use MMR algorithm. • Use gradio tool to visualize the MCQ generated given a text passage
- **Domain Rich FAQ generation** *Jan 2022 - July 2022*
Guide: Dr. Mukesh Saini **Github**
 - • Cluster the documents based on their domain using text processing and clustering algorithms. • T5 algorithm is used to generate answer-agnostic questions from the passages. • To remove duplicate question generated we use sentence to vector algorithm.To choose the best threshold for detecting duplicate questions we use Quora dataset from kaggle.

TECHNICAL SKILLS

- Programming Languages:** C, C++, Python,Java
- Libraries and Tools:** Java, Matlab, Pandas, Numpy, keras, Pytorch, L^AT_EX, Git, Django, PostgreSQL ,MySQL

KEY COURSES TAKEN

- CSE & Maths:** Algorithm & Data Structure, Operating System, DBMS,Computer Networks, Discrete Maths
- Core:** Artificial Intelligence, Machine Learning, Digital Image Processing, Multimedia,Social Computing

MISCELLANEOUS

- Selected for Onsite Finale of NITS::Hacks 1.0 (Team Event of 2 members) organized by NIT Silchar and bagged the 11th rank.
- Completed Stanford Certified Machine Learning Course at Coursera by Andrew Ng. LINK:
<https://www.coursera.org/account/accomplishments/certificate/8GAN34LRN7KC>
- Selected to attend IISC summer school among thousands of students after project selection and several rounds of interview.(couldnot attend due to college exams).
- Participated in Data Structures and Algorithms workshop by Codechef at MLRIT Hyderabad.
- Selected in Software Developer post at MAQ Software Hyderabad in campus placements and Adobe Research for internship(2024).
- GATE Computer Science 2020 98.5 percentile.
- Got recognition from Tripura State Government for being one of the top performers in Tripura Mathematical Olympiad(Secondary Level) in 2013

REFEREE

Prof. Sriparna Saha (e-mail:sriparna@iitp.ac.in; phone:+91-612-302-8128)

- Associate Professor Department of Computer Science and Engineering, Indian Institute of Technology Patna, India.

**Dr. Saha is my PhD adviser.*

Prof. Chirag Agarwal (e-mail:chiragarwall12@gmail.com)

- Assistant Professor Department of Data Science and Department of Computer Science, University of Virginia, USA.

Prof Xiuying Chen (e-mail:xiuying.chen@mbzuai.ac.ae)

- Assistant Professor Department of Natural Language Processing, MBZUAI, Abu Dhabi.