

# DEEPALI SINGH

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## EDUCATION

Indian Institute of Technology Mandi, CGPA 8.88 July 2019 - June 2023

- **BTech. in Computer Science and Engineering (with Minor in Management)**
- **Relevant Coursework:** Data Structures and Algorithms, Introduction to Deep Learning, Advanced Deep Learning, Machine Learning in Crowd Modelling & Simulation (Praktikum at TU Munich), Information and Database Systems, Data Science - Probability, Statistics & Machine Learning, Applied Databases Practicum

## EXPERIENCE

Google Developer Student Club July 2022 - June 2023  
*GDSC Lead*

- Google Developer Student Club Lead for the academic year 2022-23 for IIT Mandi.
- Conducted over 15 events including sessions, talks, hackathons, bootcamps, study jams, and challenges.
- Worked towards a proposal to make GDSC official under Gymkhana IIT Mandi.

Samsung R&D Bangalore June 2022 - August 2022  
*Software Development Internship*

- Worked in Samsung Ads team to convert batch data processing system to a Spark streaming application using distributed systems.
- Major challenges include de-duplication and anonymisation of Ad tracking data in a stream process.

Technical University of Munich Oct 2021 - March 2022  
*Semester Exchange*

- Spent the 5th semester of my Bachelor's as Winter Semester 21/22 exchange student at TU Munich.
- Successfully completed course on Introduction to Deep Learning, Master's Praktikum on Machine Learning in Crowd Modelling & Simulation, and a seminar on Data Visualization.

Indian Institute of Technology Mandi July 2021 - June 2023  
*Teaching Assistant*

- Worked as Teaching Assistant for the following IIT Mandi Courses during my BTech. – CS202 - Data Structures & Algorithms under Dr. Varunkumar Jayapaul, CS308 - Large Applications Practicum under Dr. Varun Dutt, CS302 - Paradigms of Programming under Dr. Varunkumar Jayapaul, HS510 - Essentials of Entrepreneurship under Dr. Puran.

The Girl Code July 2020 - Sept 2021  
*Community Manager*

- The Girl Code is a non-profit organisation that aims to introduce young girls to the world of programming by hosting workshops, guiding, and providing resources.
- Single-handedly built, managed, and expanded the online community which is now thriving with 2000+ girls mainly from India, Singapore, and the USA.

## SKILLS

- **Programming Languages:** Python, C++, Scala, JavaScript
- **Frameworks/Technologies:** MySQL, NodeJS, TensorFlow, Keras, Firebase, Spark, Flink, Flask<sup>0</sup>
- **Other Tools:** Git, GitHub, Jupyter Notebook, LaTeX, Socket.IO<sup>0</sup>

## KEY PROJECTS

Video Colourisation using Deep Learning July 2022 - Present  
*Major Technical Project, IIT Mandi - under Dr. Aditya Nigam*

- For my bachelors thesis, worked on the problem statement to consistently add color to black-and-white, sepia, or other monochrome videos with the help of Transformer-based models.
- Developed a model inspired by a 2021 published research paper ViViT - Video Vision Transformer which utilises Transformer for a video classification model and 2022 Google Research paper ColTran - Colorisation Transformer which colorises images using Transformer. (*Tensorflow, Keras*)

Wiki Images [github link] Oct 2020 - September 2021  
*under Dr. T A. Gonsalves - Former Director, IIT Mandi*

- Developed a python script to scrape all the Wikipedia pages and retrieve useful information about images posted in Wikimedia Commons by a user using module threading.
- This work enabled the Wikimedians community of IIT Mandi to fetch the needed data 10x faster and is now widely used amongst them. (*Python, BeautifulSoup*)

IPL Auction Platform [website link] July 2020 - Sept 2020  
*ECell Event*

- Designed and implemented a standalone website to manage the entire auctioning of players in the Indian Premier League.
- Implemented real time communication with web-sockets using firestore and the back-end controlled by an admin panel with features such as player management, accounts management for teams, and live leaderboard.
- Expanded it as a quiz platform to conduct various other college events. (*Python, Firestore, ReactJS*)

ACADEMIC ACHIEVEMENTS

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- Academic Excellence Award in CSE at IIT Mandi for academic year 2020-2021
- Bronze in High Prep PS - Expert Answers in a Flash: Improving Domain Specific QA, event held at Inter-IIT Tech Meet 11.0 at IIT Kanpur
- Scored 96.2% in 12th CBSE Boards – in top 1 percentile of 12th CBSE Board Exam in 2019
- First Runner Up in ACM-W Algorithm Contest’21 by ACM-W IIT Mandi [YouTube Link]
- Won first prize in Hack36 – a 36 hours long IIT Mandi hackathon as all women team [GitHub Link]
- First Runner Up in Enigma – a 12 hours long Machine Learning hackathon by Astrax’21 IIT Mandi

RESPONSIBILITIES

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- **Core Member, Programming Club:** Actively contributed to the programming community of the college and co-organised FrostHack’21.
- **Media Head, Literary Society:** Monitored the media presence, monthly newsletters, and e-magazines.
- **Social Media and Outreach Head, Hiking and Trekking Club:** Handled online accounts, curated content, and managed outreach.
- **Mentor, Guidance and Counselling Service:** Mentor for the batch 2024 and 2025 joining the B.Tech program at IIT Mandi.

EXTRA-CIRRUCULAR

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- Represented IIT Mandi in Group Dance and Creative Writing at Inter-IIT Cultural Meet 4.0 at IIT Bombay
- Completed Junior Diploma in Kathak Dance at the age of 8
- Core Member of Literary Society, Dance Club, Hiking and Trekking Club