

MADHUR THAREJA

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EDUCATION

Birla Institute of Technology and Sciences Pilani, Pilani
B.Sc.(H) Computer Science, CGPA: **9.83**

August 2023 - 2027

Indian Institute of Technology, Chennai
B.S. Electronic Systems, CGPA: **8.71**

September 2023 -2027

EXPERIENCE

Indian Institute of Technology Ropar

August 2024 - December, 2024

Minor in AI - Teaching Assistance and Curriculum Designing

Ropar, Punjab

- Heading the project as a Lead from IIT Ropar
- Contributed as a Teaching Assistant, responsible for developing case study based problems out of concepts like Linear Regression, Markov Chains, Perceptron Learning Algorithm and many more topics aligned with Machine Learning.
- Used Manim like powerful tools to create various animations and presentations.
- Assisting **Prof. Sudarshan Iyengar** design the curriculum innovatively as a part of research in the domain of Education Design.

NPTEL

July 2024 - Present

Teaching Assitant

Remote

- Contributed as a Teaching Assistant, responsible for developing case study based problems, assignments out of various concepts around Discrete Mathematics and helping the students enrolled in the doubts faced by them. [July,2024 - October, 2024]
- Currently a teaching assistant for Social Networks course.

iHub AWaDH, Indian Institute of Technology Ropar

August 2024 - December, 2024

Young Professional

Ropar, Punjab

- Worked for skill training and development at iHub-AWaDH, hosting various workshops for over 1000+ students.
- Successfully completed summer school: **AI Vicharana Shala** by **Prof. Sudarshan Iyengar**
As a part of summer school created the projects given including Recommendation Systems, Estimation (Like German Tank in 2 or 3 Dimensions), PageRank using Power Iteration, Simulated Annealing, Data Compression.
- Developed the understanding of Computer Vision, Supervised Learning, Self Supervised Learning, Natural Language Processing.

PROJECTS AND LAB ACTIVITIES

Gesture Detection

- Engineered a sophisticated gesture detection system incorporating hand raise and nod detection for multiple individuals, utilizing YOLOv8n and MediaPipe.

Recommedation Prediction Model

- Architected a sophisticated friendship prediction model employing Matrix Factorization, attaining exceptional precision and markedly elevating the predictive acumen of social network analysis.

Chatbot for Construction related Questions

- Conceived and developed an intelligent chatbot as part of a collaborative project for a prestigious hackathon organized by the Civil Engineering Department of IIT Madras. This chatbot proficiently answers construction-related queries and meticulously tabulates the responses, demonstrating remarkable utility and efficiency.

TECHNICAL SKILLS

Software	Quartus Prime, LTSpice, MATLAB
Languages	C++, Python, Java, Bash Shell Scripting
Computer Fundamentals	Data Structures, Algorithms, Database Management System
Electronic Fundamentals	Digital Design, Electronic Circuits, Embedded C Programming
Machine Learning	Numpy, Pandas, Scikit-learn, Regression, Classification and Clustering Algorithms
Relevant Coursework	Electrical and Electronic Circuits, Ordinary Differential Equations
Soft Skills	Problem Solving, Self-learning, Presentation, Adaptability

CO-CURRICULARS AND ACHIEVEMENTS

- **Deputy Secretary** at Ramanujan Society of Research, IIT Madras.
- **President** at Coding Club, BITS Pilani.
- Currently participating in eYantra, IIT Bombay, and developing Eco Mender Bot alongside a great team, Phase 1 cleared.
- Co-Authored books titled, 'The Unsaid Words' and 'The Unforgattable Stories' which are available on Amazon
- Represented Gurugram in Badminton in the State Championship held in Delhi
- Achieved **Bronze Medal** in Delhi region Science Quiz represeting my school.