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B.Tech in Maths and Computing
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PROJECTS

• Implementation of Text-to-Image Model RPG

- RPG: Recaptioning, Planning and Generation through LLM
- Combination of LLM and Diffusion Model.
- Contributed to its use-case in Medical Field.

• A Linux Text Editor with File Encryption

[Link]

- Gained insights into how a basic text editor works.
- Worked on making the text editor secure.
- Structured code for better maintainability.

• Worked on the Processor Simulator for ToyRISC ISA

[Link]

- Implemented the ToyRISC Assembler, Discrete Event Simulator and Caches in Simulated Memory System
- Implemented the simulation of Single Cycle Processor and Pipelined Processor
- Used Java and Object-Oriented Programming (OOP) principles to enhance code flexibility and maintainability.

• Fast Fourier Transform and Its Applications

[Link]

- Implemented DFT and FFT
- Gained experience in analyzing and transforming signals using Fourier techniques
- Applied Fast Fourier Transform for Image Compression and Audio Filtering

• Strategic Five

[Link]

- Tools & technologies used: Pygame, Python
- Algorithms used: Monte Carlo Tree Search, Minimax with alpha-beta pruning
- Used MCTS to make informed decisions in complex, uncertain environments, applicable beyond gaming.
- Structured the code for better maintainability and readability.

• CardioBeats.AI

[Link]

- Algorithm used: Polynomial Regression
- Gained insights into healthcare data and how to apply machine learning techniques in the medical field.

• KnowledgeNest

[Link]

- Tools & technologies used: Nextjs, MongoDB
- Developed a user-focused platform that connects learners with experts offering structured roadmaps and guides for mastering specific subjects and skills.

EDUCATION

• Indian Institute of Technology, Dharwad

2022-2026

B.Tech in Mathematics and Computing

CPI: 8.78

• Delhi Public School Eldeco, Lucknow

2021

CBSE (Class - 12)

Percentage: 96.2

• St. Peter's School Ambedkarnagar

2019

ICSE (Class - 10)

Percentage: 92.8

SKILLS

Technical Skills: C/C++ | Java | Python | GitHub | Docker | Kubernetes | PyTorch | JavaScript | React.js | Bash | Scripting | Linux | Node.js | NS3

Soft Skills: Communication | Time Management | Teamwork | Creativity | Problem-Solving | Critical Thinking

Relevant Coursework: Computer Architecture | Operating Systems | Computer Networks | Data Analysis | Mathematics for Data Science | Stochastic Models