

## Aman Pushkar

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B.Tech in Maths and Computing
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#### **PROJECTS**

#### • Peer-to-Peer VoIP Platform

[Link]

- Built a peer-to-peer VoIP app using Python sockets and UDP for real-time audio.
- Implemented peer discovery, registration, and multithreaded call handling.
- Gained experience in socket programming and decentralized networking.

#### Implementation of Text-to-Image Model RPG

[Link]

- 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.

## • 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]

- Algorithms used: Monte Carlo Tree Search, Minimax with alpha-beta pruning
- Used MCTS to make informed decisions in complex, uncertain environments, applicable beyond gaming

#### • Investment Management Website (Ongoing)

[Link]

- Developing a full-stack platform to deliver comprehensive wealth management solutions
- Built using MERN stack (MongoDB, Express.js, React.js, Node.js) with responsive UI, API integrations, and secure architecture.

# **EDUCATION**

#### Indian Institute of Technology, Dharwad

2022-2026

B. Tech in Mathematics and Computing

CPI: 8.79

2021

# Delhi Public School Eldeco, Lucknow

Percentage: 96.2

CBSE (Class - 12)

2019

• St. Peter's School Ambedkarnagar

Percentage: 92.8

ICSE (Class - 10)

### SKILLS

 $\begin{tabular}{ll} \textbf{Technical Skills}: $C/C++ \mid Java \mid Python \mid GitHub \mid PyTorch \mid JavaScript \mid React.js \mid Bash \mid Scripting \mid Linux \mid Node.js \mid NS3 \end{tabular}$ 

Soft Skills: Communication | Time Management | Teamwork | Creativity | Problem-Solving | Critical Thinking Relevant Coursework: Introduction to Mathematical Finance | Statistics | Data Structures and Algorithms | Computer Architecture | Operating Systems | Computer Networks | Data Analysis | Mathematics for Data Science