

Avni Jain

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Summary

I am an Information Science and Engineering student with a growing interest in web development. I have hands-on experience building innovative projects focused on network optimization and machine learning, using languages like Python. I enjoy working in teams to design efficient and user-friendly applications, and I'm continuously developing my skills in frontend and backend technologies to become a well-rounded software developer.

Education

R V College of Engineering, BE in Information Science and Engineering Aug 2023 – Present

- Current CGPA: 9.3/10
- Coursework: Data Structures and Algorithms, Object-Oriented Programming, Operating Systems

Holy Child Senior Secondary School, CBSE Board Apr 2021 – May 2023

- Percentage: 96.4%

Projects

Network Optimization Dashboard

- Developed an interactive dashboard to visualize and compare network routing algorithms including Dijkstra, A*, Bellman-Ford, Ford-Fulkerson, and a **custom multi-objective cost function** balancing latency, distance, and load.
- Designed dynamic, animated SVG network graphs with real-time routing path updates and edge-specific metrics.
- Integrated user controls to adjust weight parameters (α , β , γ) and simulate custom scenarios; visualized results via bar, line, and pie charts.
- Tools/Skills: React, Tailwind CSS, Recharts, Graph Algorithms

Football Team Optimization Web App

- Built a machine learning model to optimize football team selection based on player statistics and historical performance.
- Deployed the model within a full-stack web app featuring user authentication, AI-driven team recommendations, and an intuitive UI.
- Collaborated on both frontend and backend to ensure smooth integration and efficient data pipeline handling.
- Tools/Skills: Python, Pandas, NumPy, Streamlit, MongoDB, React

Technical Skills

Programming Languages: C++, C, Python

Libraries and Frameworks: NumPy, Pandas, Matplotlib, Seaborn, Streamlit, Recharts

Frontend: React.js, HTML, CSS, JavaScript, Tailwind CSS

Soft Skills: Problem-Solving, Communication, Team Collaboration, Time Management, Self-Learning

Courses Certifications

Data Science for Engineers – NPTEL (IIT Madras)

- Covered topics including probability, statistics, hypothesis testing, linear regression, and machine learning fundamentals.
- Assessed via weekly assignments and exam; achieved 82%.