Balbir S Bhatia

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Education

Thapar Institute of Engineering and Technology — Patiala, Punjab, India
Bachelor of Engineering in Computer Science and Engineering (Current CGPA : 9.38) — *September 2022 – May 2026*
Pursuing a comprehensive curriculum with a focus on computer science fundamentals, algorithms, data structures, and software development, achieving a CGPA of 9.38/10.

Mata Gujri Public School — New Delhi, India
Class XII CBSE (98.2%, PCM+CS), School Topper — *March 2021 – July 2022*
Excelled in Physics, Chemistry, Mathematics, and Computer Science, scoring 98.2%

Technical Skills

Languages: Python, R, C/C++, JavaScript
Data Analytics Tools: Tableau, Power BI, Spreadsheets
Frontend Skills: HTML, CSS, React.js, Bootstrap
Backend Skills: Node.js, Express.js, Flask
Databases: MySQL, PostgreSQL, MongoDB, SQLite
Libraries and Frameworks: pandas, NumPy, Matplotlib, Seaborn, scikit-learn, NLTK, TensorFlow, Keras
Core Subjects: Data Structure and Algorithm,Operating Systems,Database Management System,Computer Networks,Cloud Computing, Corporate Finanace
Other Skills: Git, Docker, Unit Testing
Courses: Google Professional Data Analytics Certificate by Coursera, Data Science and Machine Learning Course by Coding Ninjas, Overall 18+ Self Learning Courses Undertaken

Projects

Plant Disease Detection System | *Python, TensorFlow* — *June 2024 – July 2024*
- Developed a plant disease detection system using TensorFlow, achieving a classification accuracy of over 90% across 10+ plant disease categories, improving detection rates by 15%.
- Optimized neural networks in TensorFlow, enhancing disease classification accuracy by 20% through advanced model tuning and hyperparameter adjustments.
- Implemented data augmentation techniques, increasing the training dataset size by 30%, which led to a 25% improvement in model robustness and generalization.
- Collaborated with agricultural experts to validate model predictions, ensuring practical applicability and real-world impact.

Movie Recommender System | *Python, NumPy, scikit-learn, NLTK* — *May 2024 – June 2024*
- Built a personalized movie recommender system using vectorization techniques, improving recommendation accuracy by 18% based on user preferences.
- Administered collaborative filtering, reducing recommendation time by 40% and increasing the relevance of suggestions.
- Enhanced the system by incorporating sentiment analysis, leading to a 25% improvement in user satisfaction and recommendation relevance.
- Deployed the system on a cloud platform, enabling scalable access and real-time updates to recommendation algorithms.

CareHomes | *Node.js, Express.js, PostgreSQL* — *January 2024 – May 2024*
- Instantiated and optimized backend infrastructure, reducing data retrieval time by 35% and decreasing storage footprint by 20%.
- Streamlined frontend functionality by resolving two critical issues, leading to a 30% increase in engagement.
- Developed and integrated secure authentication and authorization features, enhancing overall security and reducing unauthorized access attempts by 50%.
- Facilitated user feedback mechanisms, improving overall usability and user satisfaction by 20%.

Achievements

Technical Workshops — Patiala, Punjab, India
Active Participant — *August 2022 – Present*
Engaged in numerous workshops on Machine Learning, Data Science, and Full-stack development.

Topper in School — New Delhi, India
Achieved highest marks in CBSE Class XII — *March 2021 – July 2022*
Secured 98.2% in Class XII, Got CBSE merit certificate for Computer Science and Physics