

Balbir S Bhatia

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EDUCATION

Thapar Institute of Engineering and Technology

Bachelor of Engineering in Computer Science and Engineering (Current CGPA : 9.38)

Pursuing a comprehensive curriculum with a focus on computer science fundamentals, algorithms, data structures, and software development, achieving a CGPA of 9.38/10.

Patiala, Punjab, India

September 2022 – May 2026

Mata Gujri Public School

Class XII CBSE (98.2%, PCM+CS), School Topper

Excelled in Physics, Chemistry, Mathematics, and Computer Science, scoring 98.2%

New Delhi, India

March 2021 – July 2022

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

Other Skills: Git, Docker, RESTful APIs, Unit Testing

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

Active Participant

Engaged in numerous workshops on Machine Learning, Data Science, and Full-stack development.

Patiala, Punjab, India

August 2022 – Present

Topper in School

Achieved highest marks in CBSE Class XII

Secured 98.2% in Class XII, Got CBSE merit certificate for Computer Science and Physics

New Delhi, India

March 2021 – July 2022