Dharmbir Singh

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Languages: English, Hindi

Education

Bachelor of Technology in Computer Science and Engineering (Artificial Intelligence and Machine Learning) Aug 2022 – Expected Aug 2026
Vellore Institute of Technology, Bhopal (M.P.), India | CGPA: 8.45/10

Senior Secondary (Grade XII) Apr 2020 – Jul 2021
Kendriya Vidyalaya Armapur Kanpur (U.P.),India | CBSE Board | Percentage: 79.6%

High School (Grade X) Apr 2018 – May 2019
Kendriya Vidyalaya Armapur Kanpur (U.P.), India | CBSE Board | Percentage: 77.2%

Core Competencies

- **Languages: Python**, Java
- **Database:** SQL.
- **Cloud Services and Tools:** Jupyter Notebook, IntelliJ, GitHub, GeeksforGeeks

Experience

Business Analytics Intern
QLIK Business Analytics Virtual Internship Program **April 2024 – June 2024**

- Led a data-driven continuous improvement initiative using Qlik's cloud analytics platform to enhance prediction accuracy and computational efficiency for motor vehicle accident prediction models.
- Designed and deployed a comprehensive suite of 15+ advanced visualizations—including bar charts, line graphs, scatter plots, and heatmaps—to analyze national accident trends involving motor vehicles and pedestrians.
- Extracted actionable insights on accident hotspots, temporal trends, and causative factors via interactive dashboards, supporting data-informed stakeholder decisions to improve road safety policies and interventions.

Aerospace & Robotics Intern
Indian Space Lab Winter Internship Program **December 2024 – January 2025**

- Successfully completed training in drone engineering, covering aerodynamics, embedded sensors, flight mechanics, and real-world applications.
- Conceptualized and developed *EcoDrone*, an autonomous waste detection and disposal drone equipped with an integrated claw mechanism for garbage collection.
- Applied systems thinking and problem-solving skills to design and implement a functional prototype addressing urban waste management challenges using intelligent robotics.

Key Projects

1. Integrating Machine Learning for Multiple Disease Prediction
Technologies: Python, Machine Learning (SVC, Logistic Regression), React, Node.js

- Engineered a predictive model capable of identifying the risk of multiple diseases including Diabetes, Heart Disease, and Parkinson's, using advanced machine learning techniques.
- Implemented Support Vector Classifier (SVC) and Logistic Regression to analyze historical medical data, achieving an overall prediction accuracy of 85%.
- Leveraged SVC to identify key medical features contributing significantly to disease outcomes, enhancing the model's interpretability and clinical relevance.

- Deployed the trained models to classify new patient data, enabling early risk detection and preventive healthcare recommendations through a React-based user interface.

2. Human Pose Estimation Using Machine Learning
Technologies: Python, OpenCV, TensorFlow, OpenPose, COCO/MPII Datasets, Streamlit

- Developed a real-time Human Pose Estimation system using state-of-the-art computer vision tools to detect and visualize human skeletal structures from images.
- Utilized pre-trained models and data augmentation techniques on COCO and MPII datasets, and evaluated system performance using MPJPE and PCP metrics.
- Designed an interactive Streamlit interface allowing users to upload images and view pose estimations instantly, with applications in healthcare, fitness, and surveillance systems.
- Demonstrated proficiency in deep learning, image processing, and interactive AI applications with real-world utility.

3. Smart To-Do List Application with AI Integration
Technologies: HTML, CSS, JavaScript, Electron.js

- Designed and developed a cross-platform desktop productivity application using Electron.js, featuring a sleek, responsive interface and seamless user experience.
- Integrated an AI-powered chatbot assistant that provides real-time reminders and responds to task-related queries, enhancing productivity and user engagement.
- Implemented core task management functionalities including adding, editing, deleting, and tracking tasks with automated notifications and deadline monitoring.
- Enabled data persistence through local storage and packaged the application for desktop deployment, ensuring accessibility and reliability across operating systems.

Training & Workshops

Nov 2024 – Dec 2024

- **Industrial Visit (BSNL, L&T Metro Hyderabad):** Gained hands-on experience in networking infrastructure, AWS cloud architecture, and telecom systems, impacting 10,000+ users daily.
- **IoT & Embedded C Workshop:** Built and deployed IoT-based prototypes, mastering real-time data processing and sensor integration using Embedded C.
- **AI, ML & Deep Learning Workshop:** Implemented 3+ machine learning models, analyzing datasets with 95%+ accuracy for real-world predictive analytics.

Certifications:

- Applied Machine Learning in Python — December 2023
- Privacy and Security in Online Social Media, NPTL — May 2024
- Business Analytics, Qlik — July 2024
- Computer Vision, vityarthi — December 2024
- AI: Transformative Learning, Techsaksham — January 2025

Extracurricular Activities

- Solved 200+ DSA problems on Codeforces & LeetCode, improving problem-solving speed and accuracy.
- Completed 100 Days of DSA Challenge
- President of Hindi Club managed a team of 90+ members and contributed to 5+ events.
- Advitya’22, Volleyball Tournament Team Member, runner-up (Silver)
- Awahan’23, Volleyball Tournament Team Member, Winner (Gold)