

Manvir Singh

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EDUCATION

- **MASTERS OF COMPUTER APPLICATION (2025)**
Punjabi University, Patiala (78%)
- **BACHELORS OF COMPUTER APPLICATION (2019)**
DAV College Sector 10, Chandigarh (77%)
- **CLASS XII (2017)**
Government Model Sr. Sec. School Sector 40B, Chandigarh (70.6%)
- **CLASS X (2015)**
Gem Public Sr. Sec School, Mohali (9 CGPA)

EXPERIENCE

- Worked as a **Computer Assistant/Programmer** under Mr. Arun Soni (Navdeep Publications)
- **Freelance Java Instructor:** Taught Java to ICSE students, covering OOP concepts and exam-focused topics. Designed practice materials and simplified lessons based on the ICSE syllabus.

PROJECTS

- **HYPERSPECTRAL IMAGING BASED NUTRITIONAL ANALYSIS OF MILLET**
Developed machine learning and deep learning models (CNN, XGBoost) to predict key nutritional components—proteins, carbohydrates, fats, and moisture—in millets using hyperspectral imaging data. Applied advanced preprocessing techniques, feature extraction (PCA, variance-based selection), and model evaluation (R^2 , RMSE, MAE) to enhance prediction accuracy and interpretability. The project aims to enable rapid, non-destructive nutritional profiling to support agricultural and food quality assessment.
- **JIGYASA 2.0 (Simulation Module)**
Designed interactive science simulations for Classes 6–12, aligned with CBSE/NCERT curriculum, under the CSIR Jigyasa initiative inspired by the Hon'ble PM's vision of Scientific Social Responsibility (SSR). Developed using HTML, JavaScript, CSS, and JS Canvas to promote research-based, lab-centric learning beyond textbooks.
- **CAREGIVER WEBSITE**
Developed using Node.js, Express.js, OracleDB and Frontend technologies (HTML, CSS, Javascript). The project was developed to fulfil the need of elders, children etc by providing them services like nanny, physiotherapy etc. at their doorstep by booking appointments and services online.
- **HOMEGENIUS.COM**
Developed using Node.js, Express.js, OracleDB and Frontend technologies (HTML, CSS, Javascript). The project was developed to connect customers with trained professionals across a wide range of home related needs like beauty and grooming, household maintenance etc.

CERTIFICATES

- **TEDP** in AI from C-DAC Mohali

SKILLS

- **Programming Languages & Tools:** Python (NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn), JavaScript, HTML, CSS, TensorFlow, Keras (Deep Learning Frameworks), XGBoost, Random Forest, Linear Regression, JS Canvas (for interactive simulations), MS Excel (Data Handling & Export), Java, C++
- **Machine Learning & Deep Learning**
- **MS Office:** Word, PowerPoint, Excel

VOLUNTEER EXPERIENCE AND LEADERSHIP

- Worked as a Volunteer and participated in IT Fest 2022 in college, and received Certificate of Appreciation.