

VARNICA SHARMA

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Education

Chandigarh University

B.Sc. in Computer Science, Statistics and Mathematics

Sep 2021 – May 2024

Kharar, Punjab

Manipal Academy of Higher Education

M.Sc. in Data Science

Aug 2024 – May 2026

Manipal, Karnataka

Experience

Bharat Intern

Data Science Intern

Sept 2023 – Oct 2023

Virtual

- Gained hands-on experience with core Machine Learning concepts.
- Improved proficiency in Data Visualization techniques.
- Applied Python and relevant tools to analyze and interpret data.

Code Clause Virtual Internship

Data Science Intern

Oct 2023 – Nov 2023

Virtual

- Hands-on experience in Machine Learning concepts.
- Enhanced proficiency in Data Visualization.
- Deeper understanding of Real-world problems.

Projects

Personalized Chemotherapy Response Prediction using GDSC | *Python, PyTorch, Streamlit, SHAP*

2025

- Built a personalized chemotherapy drug response predictor using GDSC genomics and drug metadata.
- Developed a deep learning model (PyTorch) to predict IC50 drug sensitivity values across cancer cell lines.
- Designed an interactive Streamlit web app with dropdown-based predictions and real-time SHAP explainability.
- Integrated drug and cell line metadata (e.g., Tissue type, TCGA classification) for improved model performance.
- Visualized prediction interpretations using SHAP plots and cancer-type-wise response benchmarks.

Multi-Omics Graph Fusion for Alzheimer's Diagnosis | *Python, PyTorch Geometric, GNN, Streamlit*

2025

- Built a GCN-based predictive model to classify Alzheimer's stage (CN, MCI, AD) using cognitive and demographic features from the ADNI dataset (19k+ patients).
- Modeled patient similarity graphs with cosine similarity on MMSE, CDR-SB, education, gender, and birth year.
- Developed an interactive Streamlit app with a patient evaluation form and real-time diagnosis predictions.
- Deployed an interactive Streamlit web app with dynamic patient evaluation form and instant diagnosis prediction, hosted via GitHub.

Technical Skills and Interests

Languages: Python, SQL, Basic R, SAS

Data Science Tools: VS Code, Jupyter, Google Colab, RStudio, Jamovi

Tools: Excel, Power BI

Areas of Interest: Machine Learning, Deep Learning, Data Visualization, Data Analysis, Statistical Analysis

Soft Skills: Problem Solving, Self-learning, Presentation, Adaptability, Project Management