



Ansh Singh

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B.Tech in Computer Science and Engineering
Vellore Institute of Technology, Chennai

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EDUCATION

Qualification	Institute / Board	Year
B.Tech (CSE)	VIT Chennai	2023–2027
Senior Secondary	CBSE Board	2020
Secondary	CBSE Board	2022

PROJECTS

Crop Disease Prediction

Tools: *Python, Tensorflow, CNN, Matplotlib*

Sep 2025

[GitHub](#)

- Designed a high-accuracy deep learning system to detect crop diseases across several plant species using custom CNN architectures and ResNet-50 transfer learning, achieving **96% accuracy**.
- Streamlined pipelines tailored to individual plant types, leveraging data augmentation (rotation, flipping, scaling) to enhance generalizability and minimize bias.
- Delivered measurable performance improvements: **8% accuracy gain** over baseline CNN.

Breast Cancer Histopathology Classification (BreakHis)

Jul 2025 – Aug 2025

Tools: *PyTorch, Vision Transformer (ViT-Small), CUDA, Google Colab, NumPy, scikit-learn*

[GitHub](#)

- Built an end-to-end deep learning pipeline for classifying benign vs malignant breast cancer histopathology images using Vision Transformer (ViT-Small) models.
- Trained **independent models across four magnification levels (40X, 100X, 200X, 400X)** to evaluate robustness against varying microscopic resolutions.
- Achieved **99.24% average accuracy**, with peak performance of **99.50%** on 40X and 200X magnifications.
- Implemented automated model checkpointing and evaluation using precision, recall, F1-score, and confusion matrices.
- Designed the workflow to be **Google Colab-compatible**, leveraging GPU acceleration (CUDA) and seamless model export to Google Drive.

TECHNICAL SKILLS

Programming: Python, C++, C

Data Science & Analytics: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn

Machine Learning: Regression, Classification, NLP, Feature Engineering

Databases: MongoDB, MySQL

Tools: Git, Postman, Jupyter Notebook

ACHIEVEMENTS

Solved **300+ DSA problems** across LeetCode, GFG, CodeChef, and Codeforces.

Achieved **1700+ rating on LeetCode**

Participant in **FlutterSprint Hackathon (Google)** and **HackRx 6.0 Hackathon**