

# Manish Kumar Baitharu

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## Education

<b>Institute Of Technical Education and Research</b> B.Tech in Computer Science and Engineering   CGPA: 8.15/10.0	09/2023-Present
<b>ODM Public School</b> CBSE   High School   80.3%	2022
<b>Prabhujee English Medium School</b> CBSE   Secondary School	2020

## Projects

### News Article Summarization using Deep Learning

Dec 2025 – Jan 2026

- Built an abstractive summarization model using **Seq2Seq with Luong attention** on the CNN/DailyMail dataset.
- Applied text preprocessing, attention mechanisms, and encoder-decoder architecture for summary generation
- Evaluated results using **ROUGE and BLEU** metrics.

**Tools/Tech:** Python, TensorFlow, Keras, Scikit-learn, NLTK, Pandas.

### Movie Recommender System

Sep 2025 – Oct 2025

- Developed a **movie recommendation web app** using **Natural Language Processing (NLP)** to suggest similar movies based on user input.
- Deployed the app using **Streamlit**, delivering an interactive and user-friendly interface to improve engagement.

**Tools/Tech:** Python, Pandas, NLTK, Scikit-learn, Streamlit.

### Cancer Detection Using Deep Learning

May 2025 – June 2025

- Developed a deep learning model using **ResNet50 with transfer learning** to classify ovarian cancer from ultrasound images, achieving 98% accuracy.
- Improved model interpretability using **Grad-CAM** and **LIME visualizations** to highlight regions of interest and explain predictions.
- Conducted **data augmentation, misclassification analysis, and ROC-AUC evaluation** to ensure robust validation.

**Tools/Tech:** Tensorflow, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn.

## Technologies

**Languages:** Python, Java, C

**Frameworks & Libraries:** OpenCV, Streamlit, NLTK, Scikit-Learn.

**Databases:** SQL

**Core Skills:** Machine Learning, Deep Learning, Data Analysis, Data Structures, Object-Oriented Programming (OOP), Database Management (DBMS), Computer Networking, Operating System.

## Training and Certifications

- HackerRank Java (Certification)**
- HackerRank Python (Certification)**
- Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate**
- Kaggle Intermediate Machine Learning Certificate**