VINAYAK SAHU

Diving Into AI/ML
vinayaksahu1672006@gmail.com • github.com/07Codex07 • linkedin.com/in/vinayak-sahu-8999a9259
Portfolio: portfolio-delta-two-15.vercel.app/

Summary

As a third-year undergraduate at Kalinga Institute of Industrial Technology, I built a strong foundation in AI/ML through hands-on projects and real-world problem solving. My work spanned computer vision, NLP, and deep learning — turning complex challenges into scalable, intelligent solutions. I built ML pipelines, smart applications, and explored cutting-edge research using Python, TensorFlow, PyTorch, and other tools. I also gained experience with GPU acceleration and LLM APIs to enhance performance and scalability.

Education

Kalinga Institute of Industrial Technology (KIIT)
BTech in Computer Science
Bhubaneswar, Odisha | 2023 - 2027

Technical Skills

Languages & Frameworks: Python, Java, HTML/CSS, Git, GitHub
Libraries & Tools: TensorFlow, PyTorch, OpenCV, Pandas, NumPy, Scikit-learn, Matplotlib, Hugging Face Transformers, LlamaIndex, LangChain
Data Analytics: Power BI, Tableau, Pandas Profiling, Advanced Excel, Google Data Studio
GPU/Cloud Integration: CUDA, Kaggle Kernels, Hugging Face Inference Endpoints
Other Tools: VS Code, Jupyter Notebook, Netlify, Streamlit

Projects

Reel2Retail – [GitHub](https://github.com/07Codex07/Reel2Retail)

A video-to-product matching system that detects fashion items in social media reels and matches them with items in a product catalog using YOLOv8, CLIP embeddings, and FAISS similarity search.
- Implemented frame-wise object detection using YOLOv8n for lightweight, real-time GPU-based inference.
- Applied OpenAI CLIP for embedding image and text features into the same semantic space.
- Indexed catalog using FAISS for high-speed similarity matching.
- Tackled challenges like frame redundancy and noisy detections using frame differencing and confidence thresholding.
- Included NLP based keyword classifier for vibe prediction.
- Reduced API latency issues using local caching and asynchronous fetch logic.

Your Next Watch – [GitHub](https://github.com/07Codex07/Your-Next-Watch)

An intelligent movie recommender system powered by content-based filtering.
- Used TF-IDF vectorization to build feature embeddings based on movie metadata.
- Applied cosine similarity to generate top-N recommendations.
- Developed a clean and interactive UI using Streamlit.
- Model optimized using GPU-based computation for scaling similarity checks.

Book Recommender System – [GitHub](https://github.com/07Codex07/Book_Recommender)

A personalized book recommendation engine utilizing collaborative filtering.
- Engineered with Pandas, NumPy, and Scikit-learn, Matplotlib.
- Addressed data sparsity by applying KNN-based imputation.
- Explored GPU acceleration for matrix similarity scoring.

Certifications

- **Supervised Machine Learning: Classification** — IBM (Mar 2025) — Credential ID B2DJ3GRE67G5
- **Unsupervised Machine Learning** — IBM (Mar 2025) — Credential ID GOKSDKRYL9L1
- **Supervised Machine Learning: Regression** — United Latino Students Association (Mar 2025) — Credential ID T8UBYGNR3Y4Z
- **Exploratory Data Analysis for Machine Learning** — IBM (Jan 2025) — Credential ID 1BHHHGVRY5IP