Rishav Jha

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EDUCATION

• **Kalinga Institute of Industrial Technology**, Bhubaneswar India **(2021-2025)**
B.Tech(Computer Science and Engineering)
Minor Degree in Financial Economics using Data Analytics
Coursework: Data Structure, Design, and Analysis of Algorithms, Operating System, DBMS

PROJECTS

• **Advanced Ecommerce Recommendation System | Python, NLP, BoW, TF-IDF, Word2Vec** Link
- Engineered a content-based recommendation system with results within 100 milliseconds.
- Supercharged product recommendations on e-commerce platforms for 1 million products.
- Attained a remarkable 98% accuracy rate with NLP Models, including Bag of Words and TF-IDF.
- Seamlessly integrated the Amazon product advertising API for enhanced functionality.

• **Handwritten Digit Recognition | Python, ML, KNN, AI, Numpy, Tensorflow** Link
- Employed KNN algorithm to achieve a recognition accuracy of 95% on handwritten digits.
- Fine-tuned the ML model to enhance performance, resulting in a 20% accuracy improvement.
- Implemented K-fold cross-validation, ensuring model robustness and reducing variance by 15%.
- Employed optimized KNN algorithms, reducing computation time by 25% with high accuracy.
- Engineered an AI architecture with efficiently processing large datasets with a 30% improvement

• **Air Quality Prediction | Python, AI, ML, Pandas, Linear Regression, Logistic Regression** Link
- Developed a Python-based ML model predicting pollution levels with 90% accuracy.
- Demonstrated proficiency in Python, ML, specifically Linear Regression, for air quality predictions.
- Achieved 92% accuracy in predicting air quality index using a Linear Regression model in Python
- Validated through 90% data analysis, ensuring high-quality input and reliable predictions.
- Conducted comprehensive data analysis, ensuring a clean dataset with 98% data completeness

• **Face Recognition System | Python, ML(KNN), OpenCV** Link
- Implemented the K-Nearest Neighbor (K-NN) classification algorithm for face recognition.
- Utilized OpenCV and HaarCascades for precise frontal face detection under 700 milliseconds.
- Achieved an outstanding error rate below 3% on a dataset comprising 1,000 images.

• **Invisible Cloak – Real-Time Camouflage System | Python, OpenCV** Link
- Engineered a real-time invisibility effect using background subtraction and color detection.
- Designed a cloak detection system that replaces a specific color with a static background.
- Achieved seamless real-time performance with efficient OpenCV image processing.
- Tackled challenges like lighting variation and blending accuracy for live video streams.

PUBLICATIONS AND PRESENTATIONS

• **R. Jha,** M. R. Panda, S. K. C., and A. Dahal, "**Deep Learning Architectures for Multimodal Sentiment Analysis**," *2025 International Conference on Intelligent and Cloud Computing (ICoICC)*, Bhubaneswar, India, May 2–3, 2025. IEEE Link

• **R. Jha,** S. K. C., A. Dahal, and M. R. Panda, "**Deep Learnings for Financial Sentiment Analysis**," *2025 International Conference on Emerging Systems and Intelligent Computing (ESIC)*, Bhubaneswar, India, Feb. 8–9, 2025. IEEE Link

TECHNICAL SKILLS

• **Languages**: C++,Python, Java
• **Web & Backend**: HTML, CSS, JavaScript, MERN Stack, Spring MVC
• **Database**: Mysql, Postgres
• **ML & DL**: Scikit-Learn, TensorFlow, Keras, PyTorch, CNN, RNN, Transformers.
• **NLP & Data Analysis**: NLTK, Hugging Face, Pandas, NumPy, Matplotlib, Seaborn, EDA
• **Developer Tools:** IntelliJ, VS Code, Git, Eclipse, Jupyter Notebook