

# J. K. LIWIN JOSE

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## INTERNSHIP

### Nexential Solutions Private Ltd

June 2023

Web Development Intern

- Designed and developed responsive web pages using HTML, CSS, and JavaScript to improve user experience and interactivity.
- Utilized MySQL for database management, ensuring efficient data storage, organization, and retrieval.

## EDUCATION

### Karunya Institute of Technology and Sciences

2021 – 2025

Bachelor of Technology in Artificial Intelligence and Data Science

Coimbatore, Tamil Nadu

## TECHNICAL SKILLS

**Programming:** Python, Java, SQL

**Libraries & Tools:** NumPy, Pandas, Scikit-learn, OpenCV, Streamlit, Hugging Face, GitHub, PyTorch

**AI & ML:** Deep Learning, Computer Vision, NLP, Image Processing

**Data Visualization:** Power BI, Excel

**Development & Cloud:** APIs, Docker, Google Cloud Platform (GCP)

**Generative AI & LLMs:** RAG, OpenAI, Google AI Studio, Claude, Cursor, Windsurf

## PROJECTS

### Smart Focus: A Deep Learning-Based Student Engagement Tracking System | *Python, OpenCV, YOLO, Face Recognition*

- Developed a deep learning-powered classroom monitoring system using YOLOv11 and face recognition to detect student behaviors, automate attendance, and track engagement.
- Trained and optimized custom models on collected datasets to classify students as attentive or non-attentive, achieving a 95% improvement in monitoring efficiency.

### Wildlife Animal Detection System | *Python, YOLO, Computer Vision, Deep Learning*

- Built a real-time animal detection and classification system using Python and YOLO (Ultralytics), enabling accurate multi-class detection from images and video streams.
- Designed the end-to-end computer vision pipeline, including dataset preparation, model training, inference, and result visualization for wildlife monitoring applications.

### Computer Vision-Based Image Comparison and Change Detection | *Python, OpenCV, NumPy, Streamlit, PIL*

- Built an interactive Streamlit web app to detect and visualize changes between two images using OpenCV-based contour detection.
- Implemented an image difference analysis pipeline with thresholding, bounding box visualization, and real-time user uploads for efficient change detection.

### Student Performance Prediction | *Python, Streamlit, scikit-learn, Pandas, NumPy*

- Developed a machine learning web app to predict student pass/fail outcomes using RandomForestClassifier trained on academic and demographic data.
- Implemented an interactive Streamlit UI with input validation, confidence scores, and real-time saving of predictions for tracking student performance trends.

## CERTIFICATIONS & COURSES

End-To-End Machine Learning Operations (MLOps) With Azure Machine Learning

MongoDB Python Developer Path

CognitiveClass.ai - Deep Learning Fundamentals

Kaggle - Data Visualization

Kaggle - Pandas

Internshala - Data Science

SUN - JAVA