

# K.VARUN KUMAR

## AI & ML ENTHUSIAST

**Phone:** +91 9704173352

**Email:** varun.kumar\_2026@woxsen.edu.in

**GitHub:** [github.com/varunkumarjay](https://github.com/varunkumarjay)

**LinkedIn:**

[linkedin.com/in/kvarunkumar2545/](https://linkedin.com/in/kvarunkumar2545/)

## SKILLS

**Languages:** Python, Java, HTML/CSS, JavaScript

**Frameworks & Libraries:** TensorFlow, Keras, OpenCV, Scikit-learn, NumPy, Pandas, pysony

**Interests:** Machine Learning, Web Development, Computer Vision, Image/Video Processing, EDA

**Tools:** Git, GitHub, VS Code

**Databases:** MySQL, MongoDB

**Development Practices:** Agile Methodology, Scrum

**Cloud/Deployment:** Streamlit Cloud

## EDUCATION

B.Tech, Computer Science, 2022 - 2026  
Specialization : Artificial Intelligence  
Woxsen University, India  
CGPA: 7.9/10

Telangana State Board, 2020-2022  
Sri Chaitanya Junior Kalasala, India  
CGPA : 7.46/10

## CERTIFICATIONS

- **Certificate of Appreciation** – Secured 6th position in the Blank Screen Coding Contest
- **Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning** – Coursera
- **Introduction to Deep Learning & Neural Networks with Keras** – Coursera
- **Algorithms for Searching, Sorting, and Indexing** – Coursera

## PROFESSIONAL SUMMARY

Proactive problem solver with a strong eagerness to learn and keen observation skills. Driven by curiosity and a desire to understand tasks and environments. Effective communicator and collaborator, able to manage multiple tasks efficiently. Brings creativity, strong research skills, and a commitment to practical solutions, even with unfamiliar challenges.

## KEY PROJECTS

### IndiPhraser – Intelligent Paraphrasing Model

Tech Stack: Python, Transformers (BERT, T5), Flask, NLP Metrics (BLEU, Semantic Similarity, METEOR)

February – November 2025

- Developed a **deep learning-based paraphrasing model** that produces contextually accurate and fluent rephrasings.
- Emphasized **human evaluation** for meaning preservation and readability, complemented by strong automated metric performance.
- Deployed the trained model on a Flask-based web interface for **real-time paraphrasing** and user accessibility.

### Photo Segregation using Supervised and Unsupervised Learning

Tech Stack: Python, InsightFace, MTCNN, InceptionResNetV1, HDBSCAN, Scikit-learn, Bayesian Optimization

August – November 2025

- Developed **dual pipelines for automatic photo segregation** – classification (SmallNet) and clustering (HDBSCAN + Cosine Metric) – to identify solo and group images.
- Achieved **89% accuracy** in the supervised model using a custom dataset of ~150 images, with strong F1 and precision scores.
- Optimized clustering metrics (Silhouette, Calinski-Harabasz, Davies-Bouldin) via Bayesian Optimization, **reducing noise images from 10 to 8**.

### Alexa Skill for MTI Users

Tech Stack: Python, Alexa Skills Kit, NLP, Flask

November 2025– Present

- Developing an **NLP-based Alexa skill** to assist MTI (Mother Tongue Influence) users in improving spoken English.
- Integrated grammar, vocabulary, and fluency checks, providing **personalized improvement feedback**.
- Planned feature: link user sessions to a database to track progress and feedback history.

# PROFESSIONAL SKILLS

- Problem-solving
- Critical Thinking
- Team Collaboration
- Time Management
- Adaptability
- Fast Learning
- Self-Motivation
- Creativity

# LANGUAGES

- English
- Hindi
- Telugu

# INTERESTS

- Learning about new Tech
- Cinematography
- Photography
- Teaching

## Blind Reading Assistant

Tech Stack: Raspberry Pi, Camera, EasyOCR, eSpeak TTS, Python  
January – March 2024

- Created a text-to-speech reading device that captures printed text and vocalizes it for visually impaired users.
- Implemented OCR (EasyOCR) and TTS (eSpeak) to process text under varying lighting and font conditions.
- Achieved **90% OCR recognition accuracy** across different lighting and font scenarios.

# EXPERIENCE AND LEADERSHIP

**Internship** - Think Again Labs (June 2025 – December 2025)

- Contributed to research and development initiatives focused on innovation and practical implementation.
- Collaborated with a multidisciplinary team to design, test, and refine project components, supporting overall project outcomes.

**Cinematography Head** - Film CLub, Woxsen University

- Leading the cinematography division, mentoring members in camera operations, lighting, and visual storytelling.
- Directed and managed shoots for multiple college events, ensuring high-quality production standards.
- Conducted hands-on sessions and workshops on camera techniques and creative direction.