

# Bonala Shanmukesh

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## OBJECTIVE

Motivated and technically adept Computer Science undergraduate specializing in AI, Machine Learning, and Computer Vision. Eager to contribute to cutting-edge projects involving model development, deployment, and automation using DL frameworks and CV libraries.

## TECHNICAL SKILLS

- **Languages:** Python, Java, JavaScript, SQL
- **Frameworks/Tools:** TensorFlow, PyTorch, OpenCV, YOLOv5/v8, Haar Cascades, ESP32, Arduino, Firebase, Google Cloud, LabelImg
- **Domains:** AI/ML, Deep Learning, Computer Vision, Embedded Systems, Web Development
- **Platforms:** Windows, Linux/Unix
- **Languages Known:** English, Hindi, Telugu, Spanish

## EDUCATION

**VIT-AP University** 2023 – 2027  
B.Tech in Computer Science and Engineering (AI-ML)  
CGPA: **9.21**

**Bheeram Sreedhar Reddy Junior College** 2021 – 2023  
Intermediate (MPC)  
Percentage: **97.3%**

**Sri Chaitanya Techno School** 2021  
High School  
Percentage: **100%**

## PROJECTS

- **Custom YOLOv5 Model for Anomaly Detection** Designed and trained a custom YOLOv5 model for real-time anomaly detection in CCTV footage. Integrated OpenCV for video stream processing and deployed alert mechanisms for automated safety responses.  
*Tools: Python, OpenCV, YOLOv5, LabelImg*
- **VisionDrive: Self-Driving RC Car** Developed an RC car with autonomous and manual navigation modes using embedded vision systems. Implemented ML algorithms to detect optimal paths using camera feed and OpenCV.  
*Tools: Python, OpenCV, ESP32, Arduino IDE*
- **Handwritten Text Recognition using TrOCR** Built a handwritten-to-digital text conversion pipeline using TrOCR and NLP with spaCy. Enhanced OCR accuracy through pre-processing, model fine-tuning, and language modeling.  
*Tools: Python, HuggingFace, TrOCR, spaCy*
- **Smart Campus Sustainability Dashboard** *Google Hackathon*  
*Finalist* Developed a real-time AI-powered dashboard for event management and sustainability tracking on campus. Integrated Google Cloud APIs, Dialogflow chatbot, and Firebase backend.  
*Tools: JavaScript, HTML/CSS, Firebase, Dialogflow, Google Cloud*

## LEADERSHIP & ACTIVITIES

**Blockchain Club, VIT-AP** *Technical Lead*  
Led workshops, coordinated hackathons, and mentored peers on blockchain fundamentals and smart contracts.

**IEEE Student Member**  
Actively participated in research events, paper presentations, and AI/ML technical conferences.

## LINKS

- [GitHub Profile](#)
- [YOLO-AD-Framework](#)
- [VisionDrive RC Car](#)
- [Handwritten OCR Project](#)
- [LinkedIn](#)