

# Mahesh Mudalagiri

 mahesh.mudalagiri@gmail.com  +91 7829324322  LinkedIn  GitHub  
 Bengaluru, India

## PROFILE

Highly motivated Computer Science Engineer with expertise in developing end-to-end machine learning pipelines and NLP systems. Proficient in Python, TensorFlow, and LLM integration, with a focus on building enterprise-ready GenAI and Computer Vision solutions.

## EDUCATION

JSS Academy Of Technical Education, Bengaluru	Dec 2022 - June 2026
B.E. in Computer Science and Engineering	GPA: 7.5
ASC Independent PU College, Bengaluru	Aug 2020 - Aug 2022
12th Standard	Percentage: 89%
VLS International School, Bengaluru	April 2012 - April 2020
10th Standard	Percentage: 86%

## TECHNICAL SKILLS

**Languages:** Python, Java, SQL, C, HTML/CSS

**AI & ML:** TensorFlow, Scikit-learn, OpenCV, XGBoost, RAG Pipelines, LangChain

**Data & Tools:** Power BI, Pandas, NumPy, Docker, Flask, Git, Linux, Pinecone

## PROJECTS

Legal Document Simplifier (GenAI)	NLP, LangChain, Pinecone, Docker
• Developed a RAG-based application using <b>LangChain</b> to simplify legal jargon, achieving a <b>40% reduction in reading time</b> .	
• Integrated <b>OCR</b> to extract text from scanned PDFs and utilized <b>Pinecone</b> for high-speed vector retrieval with <b>sub-100ms latency</b> .	
• Containerized the solution using <b>Docker</b> to ensure consistent deployment and managed context windows for documents <b>over 50+ pages</b> .	

Traffic Accident Analysis (Computer Vision)	YOLOv8, Faster R-CNN, XGBoost
• Engineered a real-time system achieving <b>97% overall accuracy</b> in predicting accident risks via vehicle proximity detection.	
• Optimized detection with <b>IoU-based filtering</b> , resulting in a <b>40% reduction in false-positives</b> and <b>98% precision</b> .	
• Built an <b>XGBoost classifier</b> for severity prediction with a <b>95% TAR</b> and a <b>FAR &lt; 1%</b> on real-world datasets.	

• Accelerated inference to process high-density video streams at <b>30+ FPS</b> for instantaneous risk alerting.	
Traffic Accident Analysis (Computer Vision)	YOLOv8, Faster R-CNN, XGBoost
• Engineered a real-time system achieving <b>97% overall accuracy</b> in predicting accident risks via vehicle proximity detection.	
• Optimized detection with <b>IoU-based filtering</b> , resulting in a <b>40% reduction in false-positives</b> and <b>98% precision</b> .	
• Built an <b>XGBoost classifier</b> for severity prediction with a <b>95% TAR</b> and a <b>FAR &lt; 1%</b> on real-world datasets.	
• Accelerated inference to process high-density video streams at <b>30+ FPS</b> for instantaneous risk alerting.	

IoT Security and Face Recognition	OpenCV, DeepFace, Flask, SQLite
• Built a full-stack security system using <b>DeepFace</b> , achieving <b>97% overall accuracy</b> and <b>95% True Acceptance Rate (TAR)</b> .	
• Optimized facial embedding pipelines, resulting in a <b>40% false-positive reduction</b> and <b>98% alert precision</b> .	
• Integrated <b>Telegram API</b> for instant photo-alerts with a <b>FAR &lt; 1%</b> using a modular <b>SQLite</b> backend for logging.	

## CREATIVE EXPERIENCE

Lead, Video Production	College Fest
• Directed <b>10+ promotional videos</b> , managing a team to deliver assets <b>15% ahead of schedule</b> for a major college festival.	
• Utilized <b>DaVinci Resolve</b> and <b>Adobe After Effects</b> for professional motion graphics and post-production segments.	