

Sai Annessha Veluri

AI and Data Science Enthusiast | Machine Learning | Driving Real-World Impact through Data-Driven Solutions

Email Me

LinkedIn Profile



I am a detail-oriented individual with a strong interest in technology, automation, and intelligent systems. I enjoy hands-on work with software development, machine learning, and real-world problem solving, and I'm eager to learn and grow through practical projects and teamwork. I have hands-on experience through my involvement at **TIHAN and LVP**, where I worked on real-world technology-driven projects related to autonomous and intelligent systems. I was also an active member of **Synapse(a technical club)**, where I contribute to collaborative initiatives, technical learning, and team-based problem solving.

Core Technical Skills

Programming Languages

Python, R, C, SQL, MATLAB, Git

ML & AI Frameworks

NumPy, Scikit-learn, TensorFlow, Keras, PyTorch, OpenCV, Pandas

Analysis and Modeling

Snowflake, Predictive Modelling, Neural networks, NLP, Reinforcement Learning

DevOps & Deployment

Docker, Kubernetes



 EXPERIENCE

Professional Journey

L V Prasad Eye Institute (IIT Hyderabad)

Project Intern | March 2025 - August 2025 (6 months)

Contributing to cutting-edge research in medical technology and AI applications.

1

2

TiHAN-IIT Hyderabad

Research Intern | June 2024 - December 2024 (7 months)

Focused on autonomous vehicle technology and computer vision systems.



EDUCATION

Academic Background



University of Colorado Boulder

Master of Science - MS, Data Science

August 2025 - August 2027



KL University

Bachelor of Technology - BTech

Artificial Intelligence and Data Science

2021 - 2025

FEATURED PROJECT

Suzuki Autonomous Vehicle

Integrated **ZED stereo vision cameras** to capture synchronized left-right image streams and compute **real-time depth maps**, enabling accurate distance estimation and spatial understanding of the vehicle's surroundings.

Leveraged stereo depth information to enhance environmental awareness, supporting **depth-aware perception** under real-world driving conditions.



Containerized Vision Development

01

Docker Containerization

Containerized complete stereo vision and object detection pipeline using Docker, ensuring portability and reproducibility.

02

Edge Optimization

Built edge-optimized Docker images suitable for deployment on vehicle hardware.

03

Kubernetes Deployment

Deployed services using lightweight Kubernetes (k3s) for container orchestration on edge devices.

04

Network Communication

Established Wi-Fi-based communication between vehicle systems and backend servers for data transfer and control.

Neural Style Transfer Project

25%

Visual Quality

Improvement in output quality

30%

Efficiency Gain

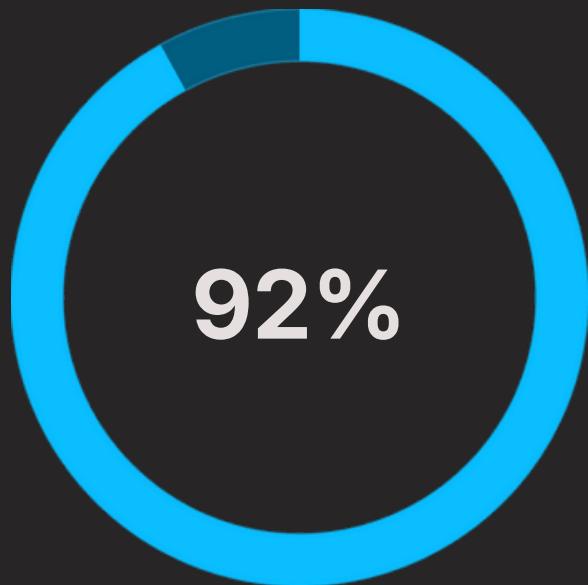
Faster computational processing

Implemented neural style transfer using pretrained TensorFlow Hub model to blend real-world images with artistic styles. Extracted content and style features via CNNs and optimized custom loss function. Extended model to support multiple style layers for dynamic blending.

Multi-Factor Health Risk Assessment

Project Overview

Created composite health risk index for newborns using population-level health and socio-economic data. Applied clustering, regression, and classification methods to identify high-risk groups.



Reliability Score

Model accuracy in health risk prediction

The image shows two side-by-side screenshots of a project proposal page. Both screenshots have a header: "Multi-Factor Health Risk Assessment for Newborns and Adolescents" and "Data-Driven Insights for Infant Health Using Classification, Regression & Clustering". Below the header is a navigation bar with tabs: Introduction, Team, Proposal Overview, Data Exploration, Models Implemented, and Conclusion. The "Proposal Overview" tab is highlighted in blue in both screenshots. The main content area contains sections: "Introduction" (with sub-sections: Research Topic & Significance, Stakeholders, Existing Solutions & Gaps, Blueprint), and "Proposal Overview" (with a detailed paragraph about the health and well-being of newborns and infants, mentioning disparities due to socioeconomic status, access to healthcare, and demographic factors). The background of the proposal content area is dark grey.

Enabled data-driven insights to reduce health disparities and target interventions, improving infant survival across diverse communities.

Inventory Optimization System



15% Waste Reduction

Developed smart web-based analytics system using React, MongoDB, and Python ML models, cutting inventory waste through data-driven insights.



20% Cost Savings

Automated inventory tracking and forecasting, helping canteens discover cost-saving opportunities.



12% Better Accuracy

Built adaptive learning models that improve prediction accuracy as new transaction data is added.



18% Efficiency Boost

Crafted real-time dashboards to visualize trends, enabling faster decisions and boosting operational efficiency.