# SURAPUREDDY AMARNATH REDDY

DATA SCIENCE PROFESSIONAL

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## SUMMARY

Data science professional with a broad skill set in developing and deploying advanced tech solutions. My role includes turning complex data into actionable insights and creating intelligent systems. I bring innovative projects from concept to reality, ensuring they operate smoothly on cloud platforms. I'm always curious to explore new ideas and not afraid to ask questions.

Deep Learning | Computer Vision | Generative AI | NLP | Cloud Computing| Data Analysis |

Web Development | AI Research | CPP |

## WORK EXPERIENCE

**Computer Vision Engineer** **09/2023 – Present**
*Alluvium IOT Solutions, Ahmedabad*

- Engineered Object Detection Model: Delivered a comprehensive object detection solution using YOLO, including data collection, augmentation, and model training, elevating the precision of detection processes.
- Developed Multi-Functional Web Application: Created a robust web application using Python's Fast API and computer vision techniques. The app intelligently tracks and counts worker hand movements between regions, integrating a trained YOLO v8 model for enhanced accuracy.
- Pioneered Multi-Threaded Video Streaming: Innovated video processing by implementing multi-threading techniques, enabling simultaneous streaming and analysis of multiple camera feeds with real-time detections.
- Facilitated User Interaction with Custom Endpoint: Developed a user-friendly endpoint for video URL input and interactive ROI drawing, enhancing client engagement and application versatility.
- Integrated Database for Data Management: Streamlined data storage and management by incorporating Mongo DB, ensuringefficient handling and retrieval of critical operational data.
- My expertise includes services like EC2, S3, Lambda, and ECR. I am skilled in designing, deploying, and managing scalable cloud infrastructure.
- Client Engagement and Collaboration: Spearheaded weekly client meetings and collaborated to improve data transformation logic in response to evolving requirements.

**Software engineer** **03/2023 – 08/2023**
*System controls technology solutions private limited, Bengaluru*

- Computer vision engineer for cutting edge Applications to detect and extracting the features and train the models and evaluating. Design system architecture to ensure that the software is scalable, reliable, and efficient.
- The backend, developed in Python/CPP with CMAKE, manages data processing, image storage. Ithandles API requests from the front end and interacts with the backed based on API.
- The front end is built using Node as the user interface. It communicates with the backend for dataretrieval and display, providing a seamless user experience.
- Train computer vision models using OpenCV C++ ML model, optimization and hyperparametertuning.
- Pioneered Multi-Threaded Video Streaming: Innovated video processing by implementing multi-threading techniques, enabling simultaneous streaming and analysis of multiple camera feeds with real-time detections.

S. Amarnath Reddy

**Software engineer** **11/2021 – 02/2023**
*Kalvet technologies llp, Bangalore*

- Technical Knowledge Dissemination: Conducted comprehensive knowledge transfer sessions, empowering team members with critical technical insights and best practices.
- Developed Multi-Functional Web Application: Created a robust web application using Python's Fast API and computer vision techniques. The app intelligently tracks and counts worker hand movements between regions, integrating a trained YOLO v8 model for enhanced accuracy.
- Pioneered Multi-Threaded Video Streaming: Innovated video processing by implementing multi-threading techniques, enabling simultaneous streaming and analysis of multiple camera feeds with real-time detections.
- Client Engagement and Collaboration: Spearheaded weekly client meetings and collaborated to improve data transformation logic in response to evolving requirements.
- The front end is built using Node/PYQt5 as the user interface. It communicates with the backendfor data retrieval and display, providing a seamless user experience

## PROJECTS

**Detecting outer diameter of cable.** **11/2021 – 02/2023**

Detecting outer diameter of Cable with Python/C++ image processing for Cable industries and user interface with PyQt5/Nodejs

**Quality detection of Wooden slats.** **03/2023 – 08/2023**

Developed a Deep learning model to detect the Quality of wooden slats using Scikit-learn and Tensor flow.

**Object Detection and Segmentation** **09/2023 – 11/2023**

An interactive object detection and segmentation application where users upload images. The system leverages the state-of-the-art YOLO v8 model for real-time object detection and segmentation. The application returns the image with highlighted areas.

## PROFESSIONAL DEVELOPMENT

EMBEDDED SYSTEMS **6 months**
*Vector India private limited, Bengaluru*

Python and SQl basics **6 months**
*Hacker rank*

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S. Amarnath Reddy

## EDUCATION

**Bachelor's of Technology** **2015 – 2018**
*Annamacharya institute of technology and science, Rajampeta.*

**Diploma** **2012 – 2015**
*ESC Govt Polytechnic College, Nandyal.*

**Navabharath em &tm High School** **2011 – 2012**
SSC, Nandyal.

## TECHNICAL SKILLS

Python | SQL | AWS | Git | Docker | PyTorch | Linux | Fast API, Flask | MS excel | Java Script | Tensor flow| Node JS

## ACHIVEMENTS

- Conducted interviews for Alluvium IOT Solutions private limited.
- Conducted interviews for Kalvet technologies llp.
- Under the guidance of Traffic Police worked as a Traffic controller for one day in Rajampeta.
- Elected as a class representative in Diploma.

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