AUTOMAX
ROBOTICS PVT. LTD.

Project Completion Certificate

This is to certify that following **Team** from the **Science and Technology Department, Vishwakarma University** has successfully completed the project titled **"Computer Vision-Based Product Counting Using YOLOv8"** under the guidance of **Dr. Nitin Satpute** and **Dr. Sukhpreet Kaur**.

Project Overview:

Injection moulding plays a vital role in mass-producing complex plastic parts with precision and repeatability. The project's objective was to develop a cost-effective and accurate system to count parts manufactured on a production line, using computer vision and AI. The solution involved deploying a high-speed camera to record real-time video of parts being rolled out from the assembly line and dynamically processing the footage using AI algorithms. The prototype demonstrated a high accuracy rate of 98%, significantly reducing the need for manual labour.

Key Objectives Achieved:

1. Achieved near-perfect classification accuracy in counting parts with computer vision.
2. Successfully implemented a contactless and reliable measurement system using AI.
3. Developed hardware capable of handling multiple cameras on a single computer system.
4. Utilized open-source Python software for analysis and implementation.

Team Members:

- **Dr. Nitin Satpute**
- **Dr. Sukhpreet Kaur**
- **Mr. Bhavin Baldota (LY – B.Tech (AI & DS))**
- **Mr. Aditya Chavan (TY – B.Tech (CS))**
- **Mr. Saumya Shah (TY – B.Tech (CS))**

Completion Date: 11th August, 2024

Authorised Signature

Mr. Sagar Mangulkar

Director (Automax Robotics Pvt Ltd)

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