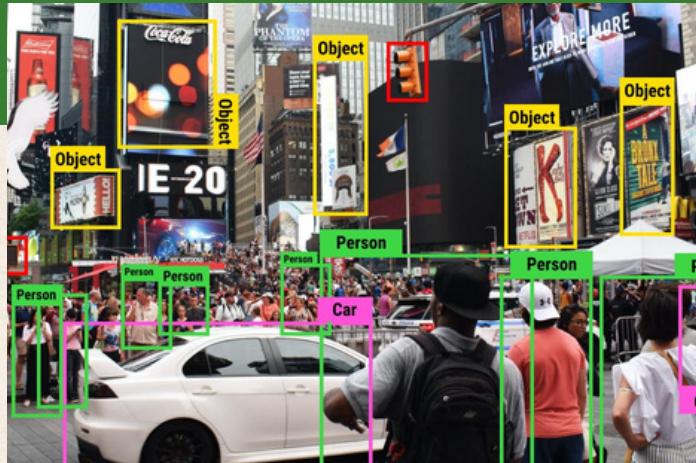


Mineral Vision



Python Image Processing and Object Detection Solution for Comprehensive Image and Video Analysis



About Us

This tool is designed to provide comprehensive image analysis and Object detection for a wide range of images (or Video Sources) across different fields. Initially developed for mineralogy studies, this Python-powered application has evolved to include Deep learning models (YOLOv8) for object detection in Real-Time video captures using "CPU", "GPU" and "NPU" [based on hardware]. Through a series of image processing steps, it can be utilized in various disciplines, including medical and drone imagery, chemistry, mineral processing, metallurgy.

SCAN NOW !

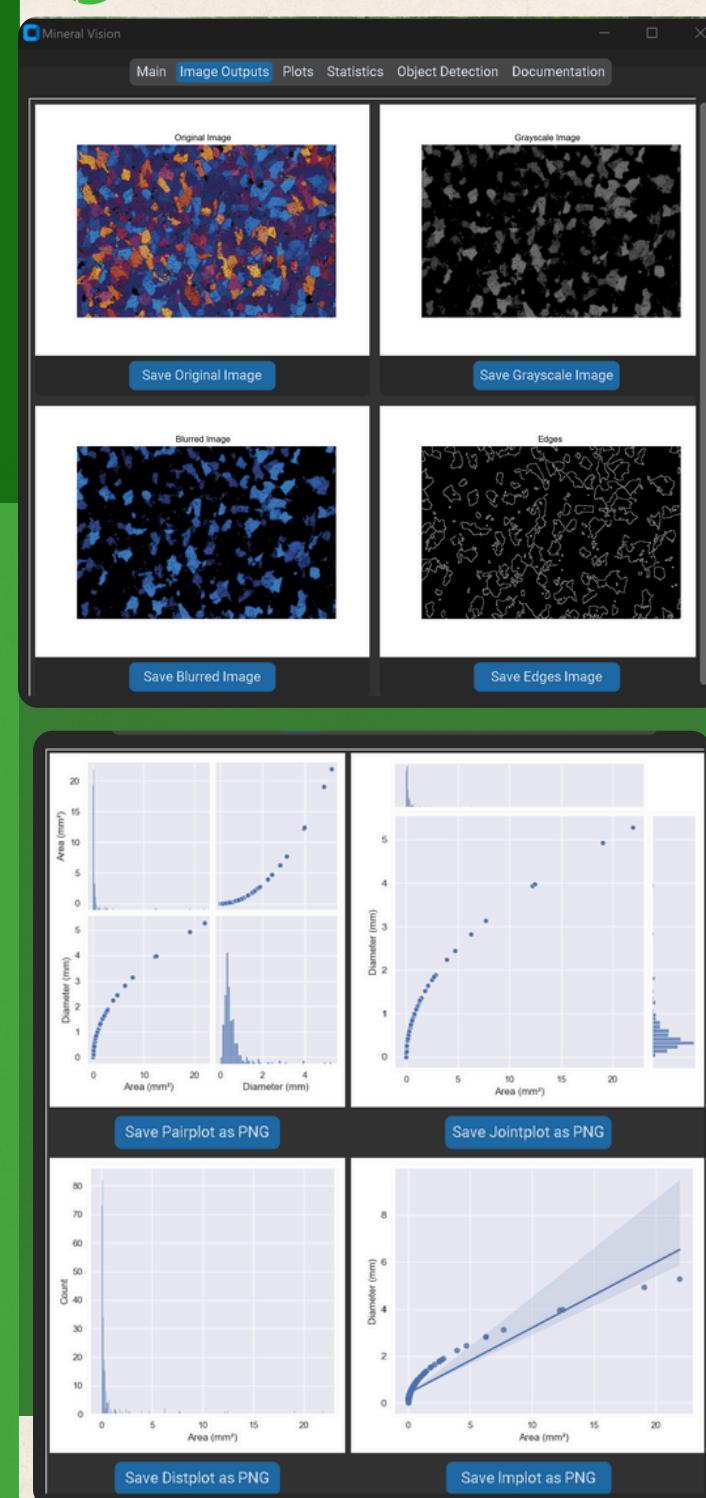


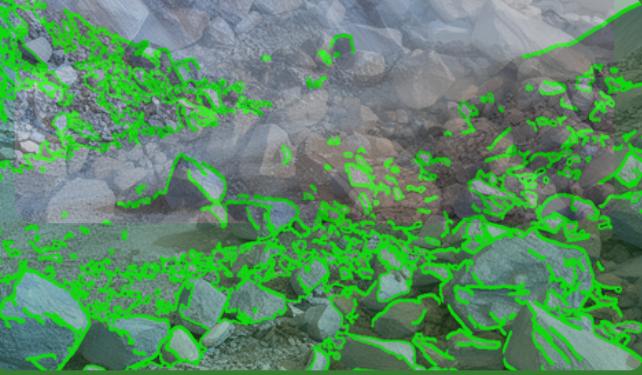
→ Email: amirfaramarzpour@outlook.com
→ Phone: +989116812737
Scan QR code for business inquiries

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Obfuscated source code for Linux



 Simple and Interactive UI





Model and algorithms

YOLO (You Only Look Once)

YOLO, developed by Joseph Redmon et al., is a state-of-the-art object detection system. It is known for its speed and accuracy in detecting objects within images and video streams. YOLO processes images in real-time, making it suitable for applications requiring immediate response, such as autonomous driving, security systems, and video surveillance.

OpenCV (Computer Vision Library)

OpenCV is an open-source computer vision and machine learning software library. It offers a comprehensive set of tools for image processing, video capture, and analysis, enabling developers to build complex computer vision applications effortlessly. OpenCV supports various programming languages and platforms, making it a popular choice for both academic and industrial projects.

Canny edge detector algorithm

The Canny edge detector is an edge detection operator that uses a multi-stage algorithm to detect a wide range of edges in images.

Available Features

IMAGE PROCESSING

Offers various image processing features such as grayscale conversion, blurring, edge detection, and more.

REAL-TIME OBJECT DETECTION

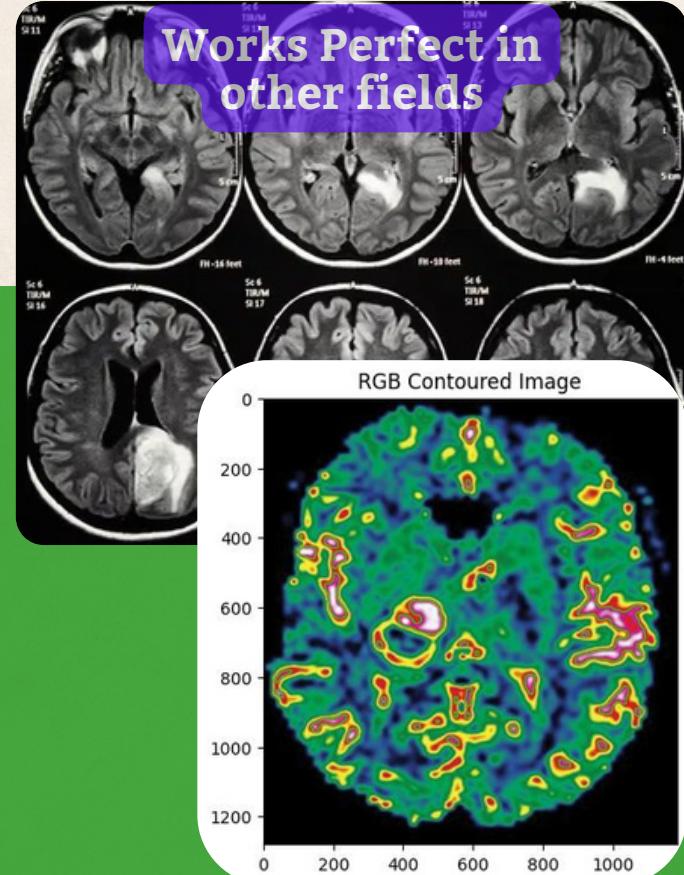
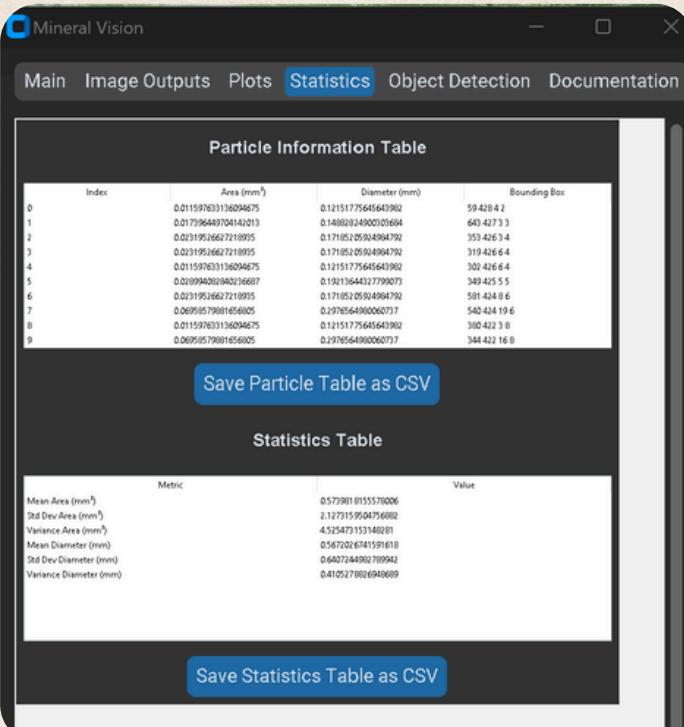
Utilizes **YOLOv8** Deep Learning Model for accurate and efficient object detection in video streams.

PLOT GENERATION

Generates various plots to visualize data derived from image analysis using **Seaborn** library.

STATISTICAL RESULTS

Shows Statistical results using **Pandas** Data frames with image analysis, including particle surface area and diameter.



Works Perfect in other fields

Collaborative customization is also available

- Blasting process optimizing/evaluating based on size distribution
- Size distribution graph using object detectors.
- Monitoring the crushers feed characteristics.
- Can utilize Pytorch and OpenCV to detect object both in image and video captures for Drone images based on color to identify multiple zones [Not Included in Basic version].
- Supervised training model using Machine learning and Data science for predicting desired parameters based on need.
- Useful in Medical Imagery.