

New Release Desktop App

Minor version - V3.1.5

2025/03/11

Csmart Digit v3.1.6

File Name: No file opened

File Location: D:\Csmat_Digit\Analysis

Last AI Model: No previous analysis

Home

Welcome to Csmart-Digit 1

AI-Powered Coffee Seed Analyzer

New Analysis
Create a new analysis file by capturing individual seed images from a coffee sample.
Create New Analysis >

Open Analysis
Select an existing analysis file to review its results or rerun a model on the stored images.
Open Existing Analysis >

Browse Analyses
Navigate through all analysis files in the selected folder to review their key information.
Browse Analyses >

Artificial Intelligence
Select an AI model and run it on a single analysis file or multiple files at once. The model will classify each image into one of the trained classes and grade the coffee sample based on the incorporated methods.
Classify Using AI >

Live Analysis
Leverage Csmart-Digit's advanced AI models to analyze samples in real-time. Identify specific categories or define descriptive rules to detect objects beyond the model's training data.
Start Live Analysis >

Knowledge Base
Explore the Csmart-Digit Knowledge Base, a comprehensive resource offering guidance, troubleshooting tips, and detailed information about the Csmart-Digit software.
Explore Knowledge Base >

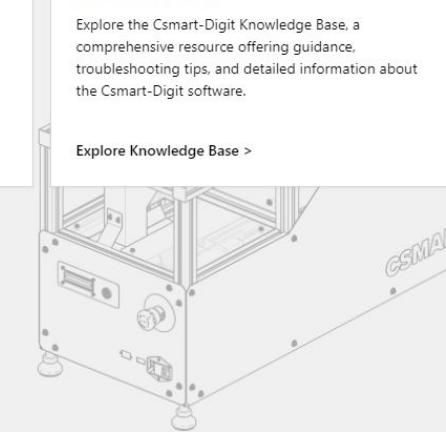
1191 AI Analyses Run
0.09 Recorded Hours

Version 3.1.6 | Csmart Coffee Technologies SA 2025

Home Section

1. New Home Section featuring buttons and panels with essential routes for operating the software.

2. Display of Analysis Count & Time Record: Indicates the number of analyses run on the computer, along with a time record for the camera.



File Name
No file opened

File Location
D:\Projects\csmart-digit-validation\vn

Last AI Model
No previous analysis

Quality Control

Home

Browse Analyses

Artificial Intelligence

Dashboard

Image Mosaic

Lot Info

Classification Report

Export Data

Export Images

Compare

Live Analysis

Cloud | Local Services

Upload Analysis

AI Model | Dataset

Edit Model

Evaluate Model

System Configuration

Acquisition Settings

General Settings

Quality Control

Browse Analyses

Selected Folder: D:\Projects\csmart-digit-validation\vn

Change Folder

Sort by: Color

File Name Total Defects BB Other Defects Foreign Matter Inspected Seeds

VN_ROB_G118_2BB_MASCOPE... 26.1% 1.9% 23.5% 0.7% 910

2025/01/20 Last AI Model: 224_MCL_SEGFORMB5_CAN_VNM_NATV06_M90 16.7%

VN_ROB_49C16502_LYTHANH 32.6% 2.6% 29.1% 0.9% 1497

2025/03/11 Last AI Model: 224_MCL_CNVNXTL_CAN_VNM_NATV06_M86 17.1%

VN_ROB_FAQ_SHP_11724 36.1% 1.6% 33.0% 1.5% 1789

2025/02/25 Last AI Model: 224_MCL_CNVNXTL_CAN_VNM_NATV06_M86 17.8%

VN_ROB_S182BB_INTBL_85060 18.3% 1.0% 16.6% 0.8% 732

2025/01/17 Last AI Model: 224_MCL_SEGFORMB5_CAN_VNM_NATV06_M90 13.7%

VN_ROB_FAQ_PHUONGTIEN 32.4% 1.0% 28.6% 2.7% 1520

2025/02/25 Last AI Model: 224_MCL_CNVNXTL_CAN_VNM_NATV06_M86 16.1%

VN_ROB_R1S16_2BB_TTD_84997 21.5% 0.3% 21.1% 0.1% 1272

2025/01/08 Last AI Model: 224_MCL_SEGFORMB5_CAN_VNM_NATV06_M90 15.9%

Browse Analyses

3. New Browse Analyses tool designed for quickly assessing data from multiple analyses at once.

4. Click "Change Folder" to select a folder and display its contents.

5. Sort analyses by multiple features to easily find samples with specific characteristics.

6. Click anywhere on the analysis panel to open the file and view it as intended.

File Name
No file opened

File Location
D:\Projects\csmart-digit-validation\vienna\24Feb2025

Last AI Model
No previous analysis

Quality Control

Live Analysis 7

1. Select the folder to save the images

Select Folder 8

D:\Projects\csmart-digit-validation\vienna\24Feb2025

2. Type the name of the analysis

Analysis name

3. Select the AI model to use in live mode

Select Model 9

Selected Model: AI model not selected

AI model not selected

4. Create the rules for object detection

No detection rules have been created.

Create Rule 10

5. Specify whether the device should stop when any rule is met

Stop device 11

6. Click 'Record Live Analysis' to start

Record Live Analysis 12

Live Analysis

7. New "Live Analysis" tool designed to classify the sample in real time based on customized rules created by the user.

8. Click "Select Folder" to specify where to save images that meet the criteria established later.

9. Select the AI model to run during Live Analysis.

10. Create rules that describe the object intended for detection. Both class detection and descriptive rules can be implemented.

11. Select "Stop Device" to halt the belt conveyor when the conditions are met.

12. Click "Record Live Analysis" to start the process.

Live Analysis

File Name: No file opened

File Location: D:\Projects\csmart-digit-validation\vn\24Feb2025

Last AI Model: No previous analysis

Selected Model: 224_MCL_CNVNXT_L_ARA_BRA_MIXEDV9_G97

Classification Methods: NY

Classes: Black, Broken, Floater, Fox Bean, Husk, Immature, Insect Dam, Ok, Partial Parch, Whole Parch, Dried Cherry, Shell, Sour, Stick, Stone, 10 and Below

Species: Arabica

Variety: Mixed

Origin: Brazil

Region: Sul de Minas/MG

Processing Method: Mixed

Accuracy: 97.0%

Database Name: MCL_MixedProcessing_v09

Model Issued: October/2024

Model Version: 41

4. Create the rules for object detection

ID	Parameter	Rule	Value	Remove
0	Class	Equal to	Stone	Remove
1	Brightness	Greater than	150	Remove
2	Form Factor	Greater than	2	Remove
3	Area	Less than	20	Remove

14

Create Rule

5. Specify whether the device should stop when any rule is met

Stop device

6. Click 'Record Live Analysis' to start

Record Live Analysis

Live Analysis

14. In this example, a set of rules was created to stop the device if any condition in the set is met.

The rules are: If the seed's classification is "Stone," or if brightness is greater than 155, or the form factor is greater than 2, or the area is less than 20, the device stops.

Brightness is the grayscale color of the seed, ranging from 0 (black) to 255 (white).

Form factor is the ratio between the smaller and larger sides of a circumscribed rectangle.

Area is the seed's pixel area. Area parameters can be checked with the camera on by placing the seed in the field of view.

Quality Control

-  Home
-  Browse Analyses
-  Artificial Intelligence
-  **Dashboard**

-  Image Mosaic
-  Lot Info
-  Classification Report
-  Export Data
-  Export Images
-  Compare
-  Live Analysis
-  Cloud | Local Services
-  Upload Analysis

AI Model | Dataset

-  Edit Model
-  Evaluate Model

System Configuration

-  Acquisition Settings
-  General Settings

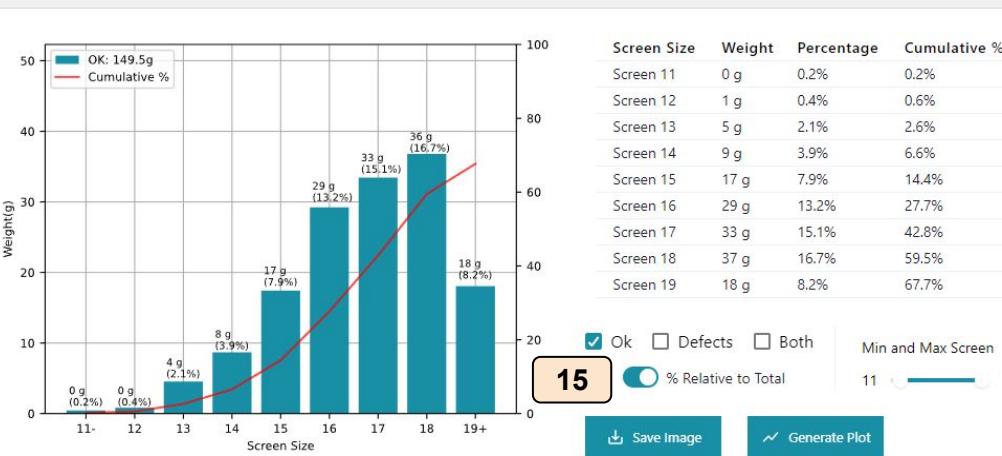
Quality Control

Dashboard

 Relative to Weight

Total Defects	BB	Other Defects	Foreign Matter	Inspected Seeds	VIETNAM Protocol	Dominant Color
32.4% Weight: 71 g	1% Weight: 2 g	28.6% Weight: 63 g	2.7% Weight: 6 g	1518 Est. Weight: 220g	Grade 6 Eq. Defects: 287	RGB(139, 129, 101)

Screen Size Distribution



Classes Distribution



15. A new switch was added with two stages: % Relative to Total and % Relative to Group.

% Relative to Total represents the percentage of OK or Defect samples based on the total sample weight, meaning it does not sum to 100%.

% Relative to Group represents the percentage of OK or Defect samples based on their respective weights, ensuring the total equals 100%.



CSMART COFFEE TECHNOLOGIES SA

Francisco Massucci Silveira
Founder | CTO

webpage: www.cmsart.ai

email to: grading@csmart.ai

whatsapp: +55 19 998267366

Address: Av. Alan Turing, 776 - Sala 3,
Cidade Universitária. Campinas/SP - Brasil - CEP 13083-898