

Data Collection and Preprocessing Phase

Date	15 March 2024
Team ID	740050
Project Title	YOLOChemDetect safeguarding with Automated Drug Name Detection
Maximum Marks	6 Marks

Preprocessing Template

The images will be preprocessed by resizing, normalizing, augmenting, denoising, adjusting contrast, detecting edges, converting color space, cropping, batch normalizing, and whitening data. These steps will enhance data quality, promote model generalization, and improve convergence during neural network training, ensuring robust and efficient performance across various computer vision tasks.

Section	Description
Data Overview	Medical text for drug detection.
Resizing	Adjust document size.
Normalization	Standardize text.
Data Augmentation	Add synthetic data.
Denoising	Remove noise from documents to improve accuracy.
Edge Detection	Highlight key areas for drug name identification.

Color Space Conversion	Convert document images to standard format for better analysis.
Image Cropping	Crop irrelevant sections for documents for focused processing.
Batch Normalization	Normalize document data in batches to improve model performance.
Data Preprocessing Code Screenshots	
Loading Data	Import medical documents for drug name detection.
Resizing	Resize images to standard dimensions for processing.
Normalization	Standardize document data for consistent analysis.
Data Augmentation	Enhance the dataset with synthetic samples for robustness.
Denoising	Remove noise from documents to improve detection accuracy.
Edge Detection	Identify key areas in images for drug name recognition.
Color Space Conversion	Covert images to suitable color formats for analysis.
Image Cropping	Crop irrelevant parts of images to focus on key information.
Batch Normalization	Normalize data in batches to optimize model performance.