



AI assessment: Hand writing and printed character recognition from scanned documents and forms.

AI Pipeline application:

The task is to train and deploy a deep neural network that recognises hand writing and printed characters from scanned documents and forms.

Create a web API with minimal interface that accepts a image(scanned document) and returns the words present in the document.

AI Pipeline blocks:

1. Webservice
2. Detection Model: Any model of your choice which works well on hand written and printed character recognition.

Deliverables:

- A zip file for the working demo containing all relevant scripts along with the project folder and steps(README.md) to start this project locally.
- A write-up of the end-to-end steps and documentation for this assignment. A semi detailed explanation of your solution. It may also contain other approaches you think will work for the problem and some comparisons between them.
- The response of the API should contain visualization of the image with bounding boxes and labels adjacent to them. A downloadable JSON file with key value pairs of detected words and bounding boxes.
- Also, identify 'field', 'value' pairs(list of fields provided below) in the document and return a separate JSON file.
Ex: If there is a **Name:** field in form, followed by the value *Rajnikanth* return it as {"Name": "Rajnikanth"} (in a JSON file).
- Fields: Scheme Name, Folio Number, Number of Units, PAN, Signature, Tax Status, Mobile Number, Email, Address, Bank Account Details.

Note

- Choose your own build or appropriate open source models which work best on the task.
- Do not use hardcoded paths for client-server communication.
- Output visualization with bounding boxes and labels is a part of the solution.
- Include instructions to set up and run the project end to end.

FINAL REPORT AMENDMENT

Study Name Acute Toxicity of Reference Cigarette Smoke after Inhalation in
Study Number I-1725.001 Mice.

Initiation Date 25 March 1982

Date of Final Report (Review Completed Date) 27 April 1982

Part of Final Report to be Amended (Exact location) _____

The attached is an addition to the I-1725.001 Final Report

Reason for the Amendment Survival after repeated doses over a 14 day period
may not be accurately predicted from survival after a single day's
exposure.

Amendment (Attach additional sheets as necessary) The report of the results of
A 14 Day Repeated Dose Assay for Reference Cigarette Smoke in Mice
(I-1725.001-M1) is attached.

6/3/82

DATE

[Signature]
STUDY DIRECTOR

APPROVALS

ACCEPT/REJECT (as per 58.185 (c))

03 June 1982

Accept

[Signature]
QUALITY ASSURANCE ASSOC.

3 June 1982

Accept

[Signature]
DIRECTOR OF RESEARCH

3 June 1982

Accept

[Signature]
DIRECTOR OF RA/QA

Received by REGULATORY AFFAIRS

3 June 82

[Signature]
REGULATORY AFFAIRS

89368010

Fig. 1: Input image

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Fig. 2: Output image

Addendum:

- Training data will be provided, and can augment with your own training data.
- More than one model is accepted and encouraged (even pretrained models).
- Evaluation is based on test accuracy, approach, inference speed, deliverables etc.
- May use jupyter notebook (preferred), google-colab or kaggle for development.
- Save the weights (after training) in pickle format, so that it can be loaded later.
- Caution: If the runtime ends in G colab, all the files and output will be lost.
- If using G colab, try working from mounted G drive to save the output and other files.
- **Submission due date and time: 6-Sep-2024, 18:00 IST.**
- **Name the final .zip file with your name and employee id and upload in the AI assessment team in MS Teams.**
- **Evaluation starts from 9-Sep-2024.**
- Revert for any queries. Good luck 😊.