

The background of the slide is a light gray gradient, decorated with numerous realistic water droplets of various sizes. Some droplets are large and prominent, while others are small and subtle, scattered across the top and bottom edges of the frame.

HANDWRITING RECOGNITION USING MXNET

ACCENTURE DIGITAL CHALLENGE

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IDEA / APPROACH

THE PIPELINE IS COMPOSED OF 3 STEPS:



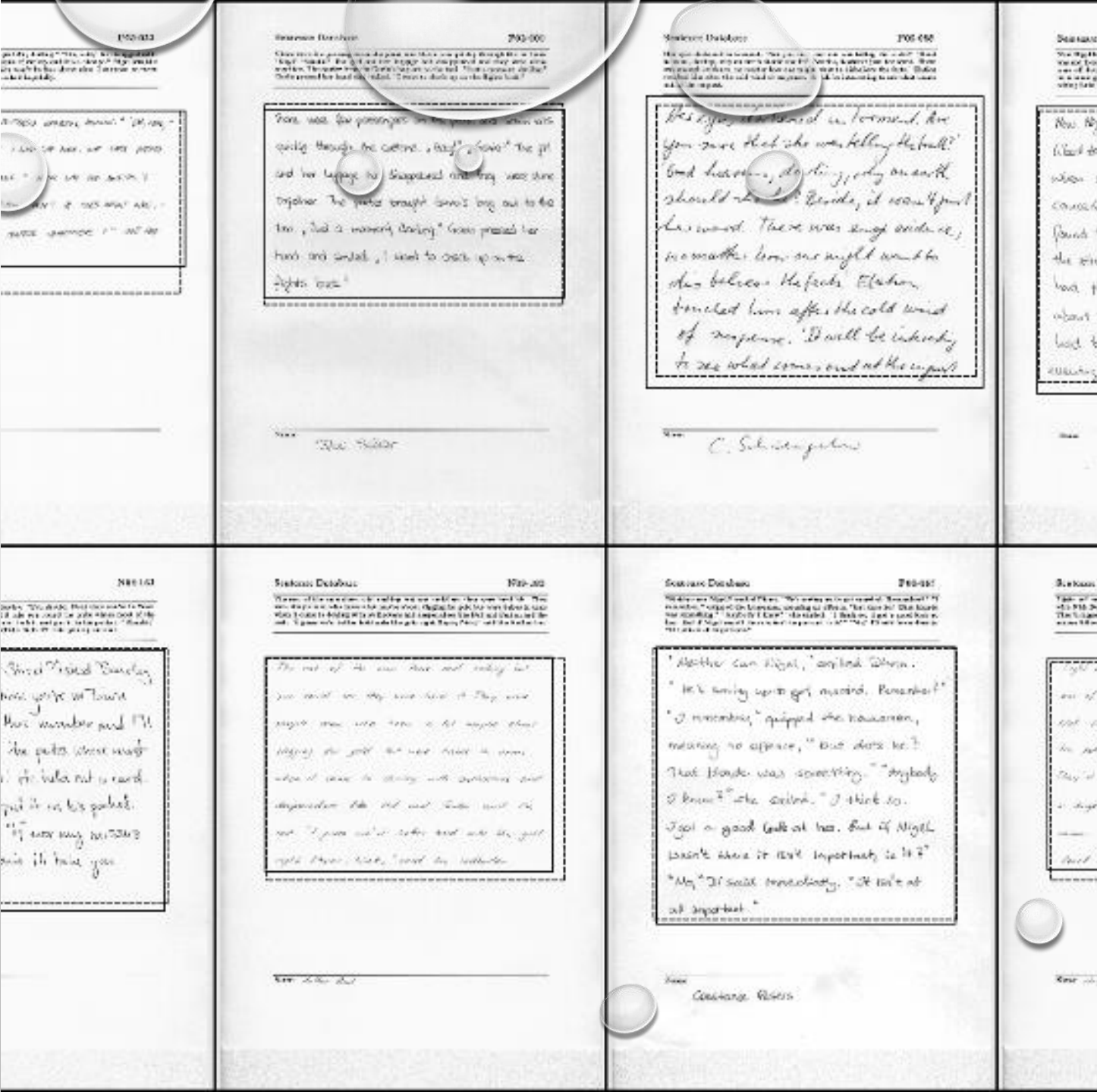
A MOVE to stop Mr. Gaitskell from nominating any more Labour life Peers is to be made at a meeting of Labour M Ps tomorrow. Mr. Michael Foot has put down a resolution on the subject and he is to be backed by Mr. Will Griffiths, M P for Manchester Exchange.

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DATASET

IAM HANDWRITING DATASET:

- 1,539 PAGES OF SCANNED TEXT.
- 5,685 ISOLATED AND LABELED SENTENCES.
- 13,353 ISOLATED AND LABELED TEXT LINES.
- 115,320 ISOLATED AND LABELED WORDS.



PAGE SEGMENTATION

THIS WAS DONE USING MSERS, OR
MAXIMALLY STABLE EXTREMAL REGIONS
ALGORITHM.

LINE SEGMENTATION

THIS WAS DONE USING SSD(I.E. SINGLE SHOT MULTI-BOX DETECTOR). RESULT:

A light wind bore the smoke of diesel exhaust in
through the open window of the Captain's house. It
permeated every room but neither Henry nor Madeline
noticed its existence as they sat in silence over
a substantial breakfast. Although usually a very
talkative lady Madeline respected her husband's
silences, for she knew they belated a worry of
some sort.

"Can't go lighting bonfire
the conductor said firmly.
Company's Regulations." Of
the minister. "No, we have and
our position. The driver must
continuously." Gave him a look
"Where you think we are?" he
"Downs High Street?"

"You mean Munyard?" "Sure. Very useful
contact, is our Rabbi; he gives us the gen and
we give him the publicity. The Honourable
Rabbi and friend, what? You know that
sort of thing. "You'll get nothing out of me,"
said John, "but you can pay for my drinks
if you want to, as long as you keep off
Jama matters."

Glad I met you. Don't forget
anytime - knock twice and ask
I don't know when that will
I shall be busy for awhile
Master Moody Munyard. "I'll
lying in pairs alongside the
black and grimy bus, next to
sounded, for all of them were
changed their electric batteries.

TEXT RECOGNITION

INFERENCE : WITH CTC BEAM SEARCH AND LANGUAGE MODEL

a) Greedy algorithm outputs

got a these tovely things'; she woved a
got all these lovely things' - she woved a

selt as a stanger in these panks
selt as a stranger in these panks

the rannd-abont, which was pop
the rounel abornt, which mas p

has come forhim to he taken seriously
has come for him to be taken seriously

b) Lexicon search outputs

got a these lovely things'; she waved a
got all these lovely things' - she woved a

salt as a stranger in these pranks
selt as a stranger in these panks

the rannd-abont, which was pop
the rounel abornt, which mas p

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c) Beam + lexicon search and language model output

got all these lovelythings'- she waved a
got all these lovely things' - she woved a

self as a stranger in these pars
selt as a stranger in these panks

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CONCLUSION

THE CURRENT MODEL WORKS NEARLY PERFECT WITH THE IAM DATASET, HOWEVER FACES VARIOUS ISSUES IN CASE OF OTHER DATA. THE PIPELINE CAN BE ENHANCED IF MUCH MORE DATA IS MADE AVAILABLE. ALSO A UI INTERFACE CAN MAKE THE APPLICATION EASIER TO USE WHICH WE ARE WILLING TO DEVELOP FURTHER.