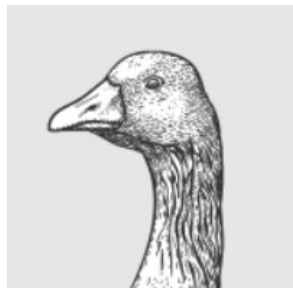
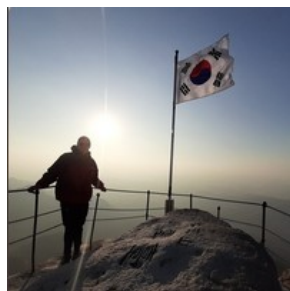


Kuzushiji Recognition

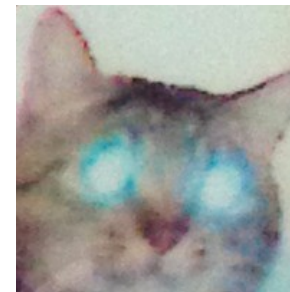
Ollie, Nanashi, and Tom (#9)



Student at Exeter
Mathematics School



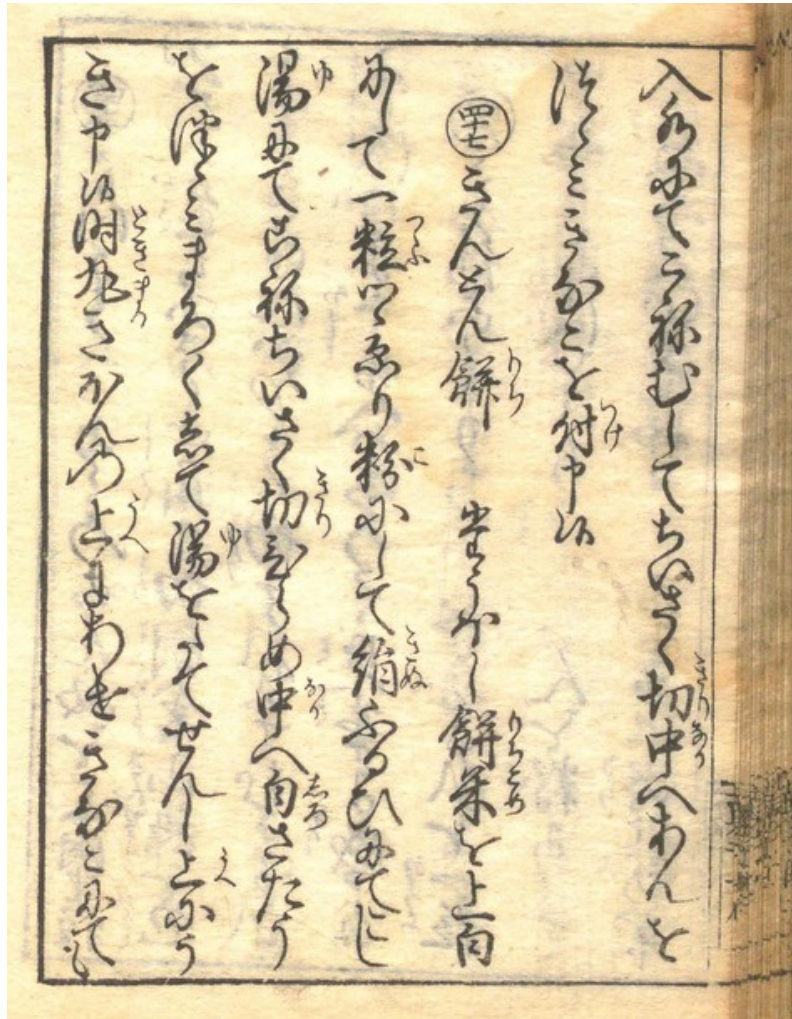
Student at University
of Valladolid



Ph.D. in physics

Marcos Conde, Ollie Perrée, Tomohiro Takesako

Introduction

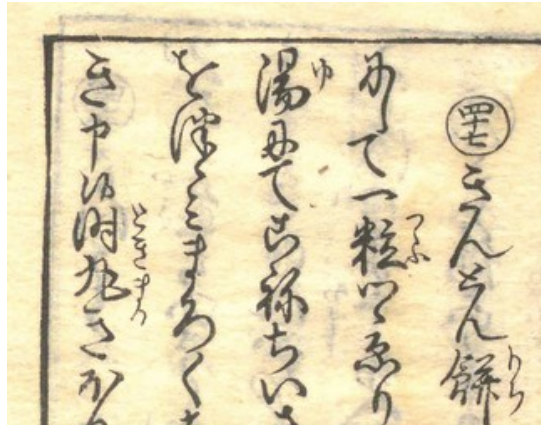


Digit classification?

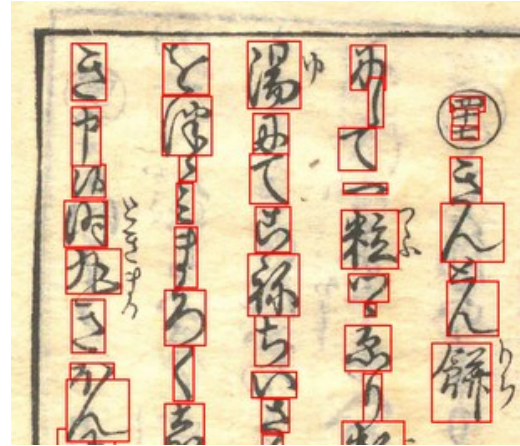
Great dataset
(+8000 pages)

No background

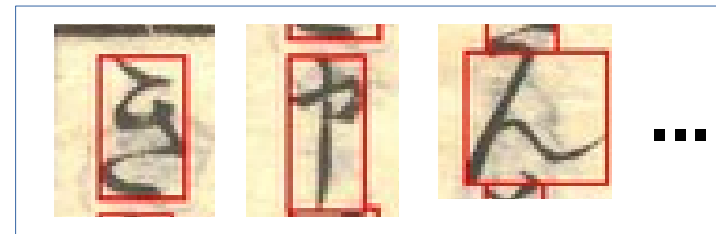
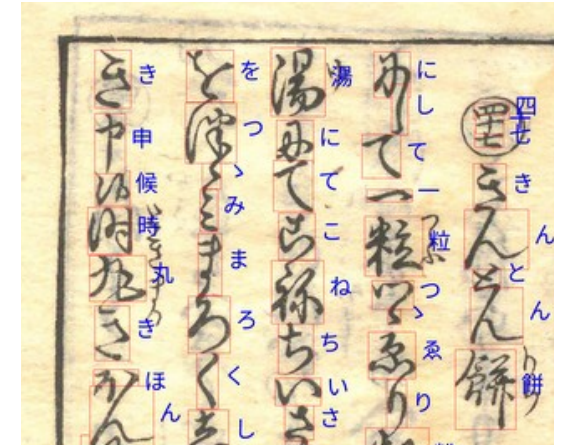
Initial Approach



Detection

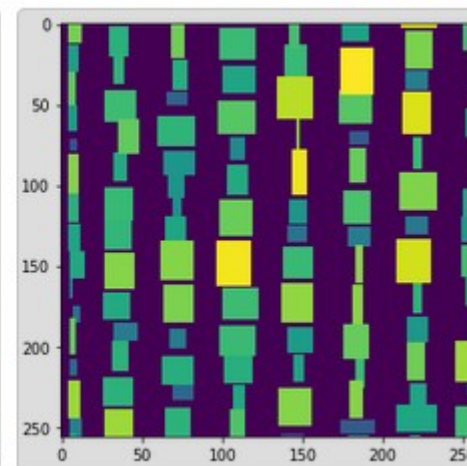
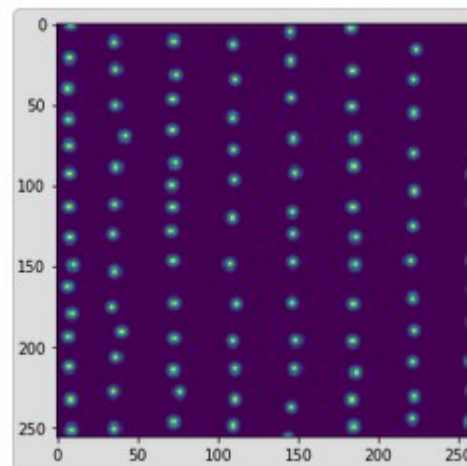
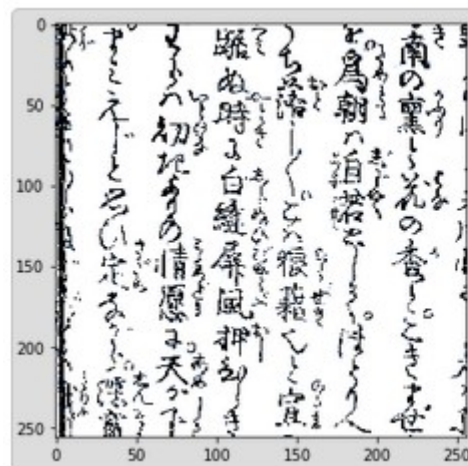
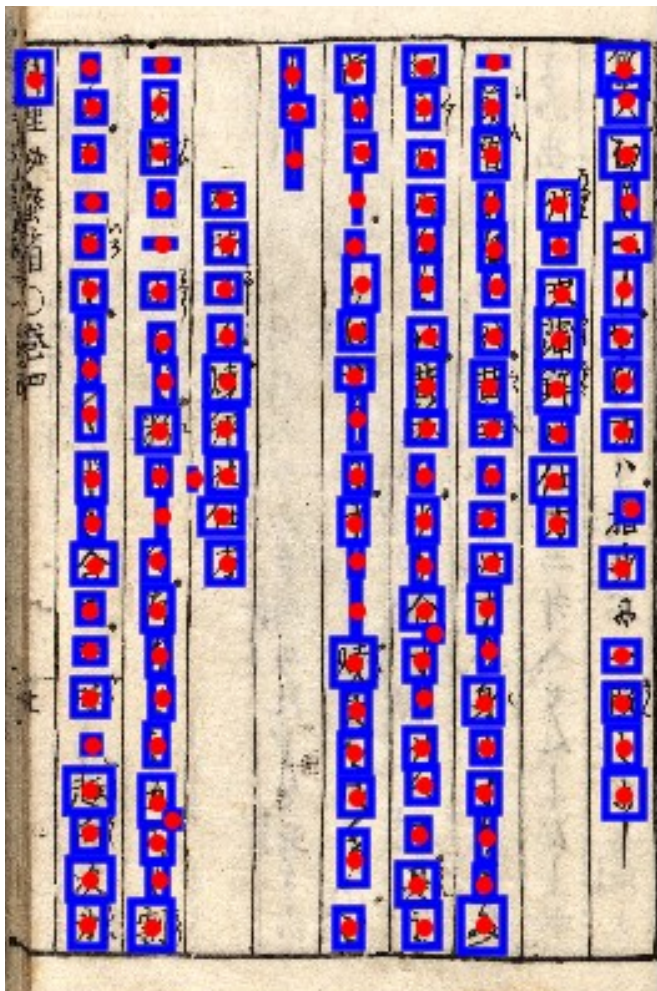


Classification



Japanese

Detection



CenterNet (original paper)

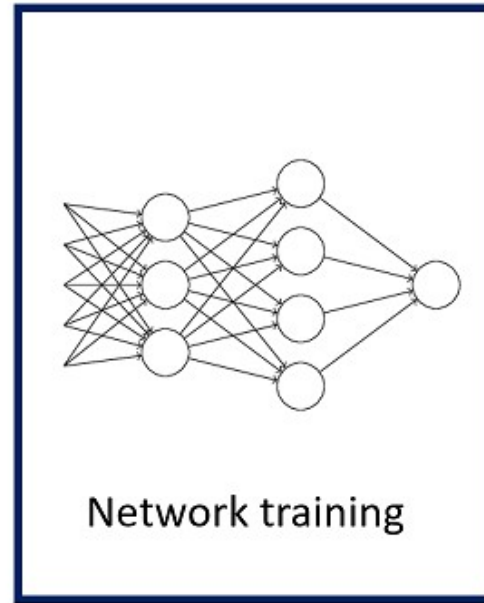
- Problems?
- False positives
 - Limited



Classification



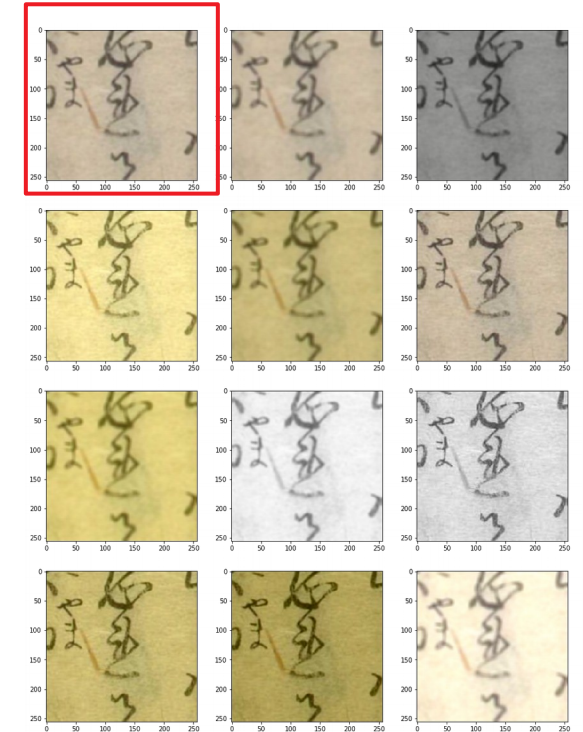
Data & Labels



Simple ResNet 18



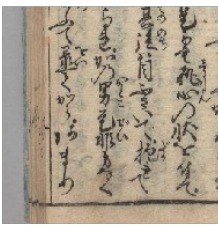
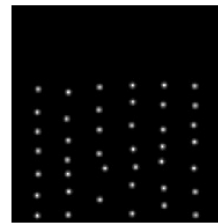
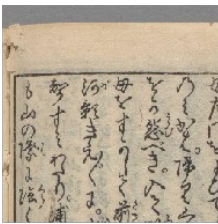
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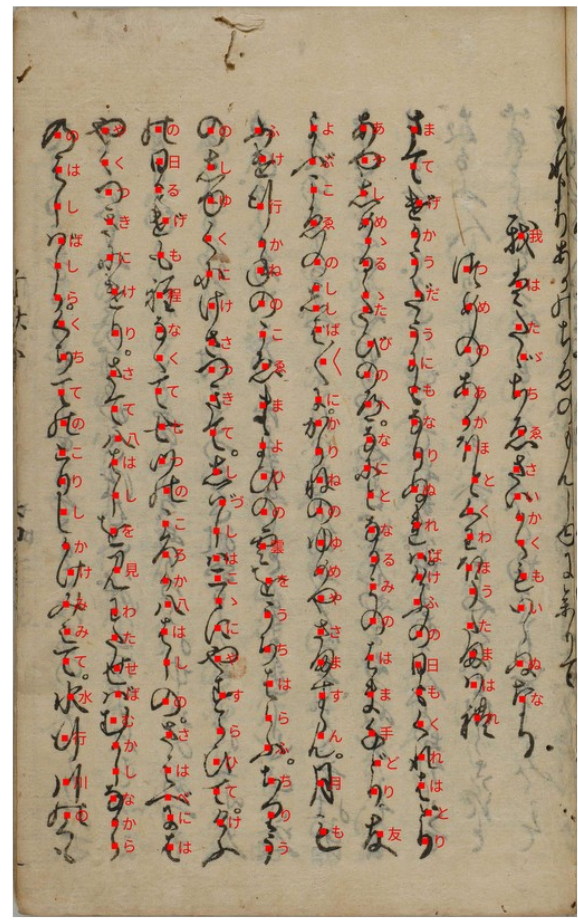
Augmentations

Final Results

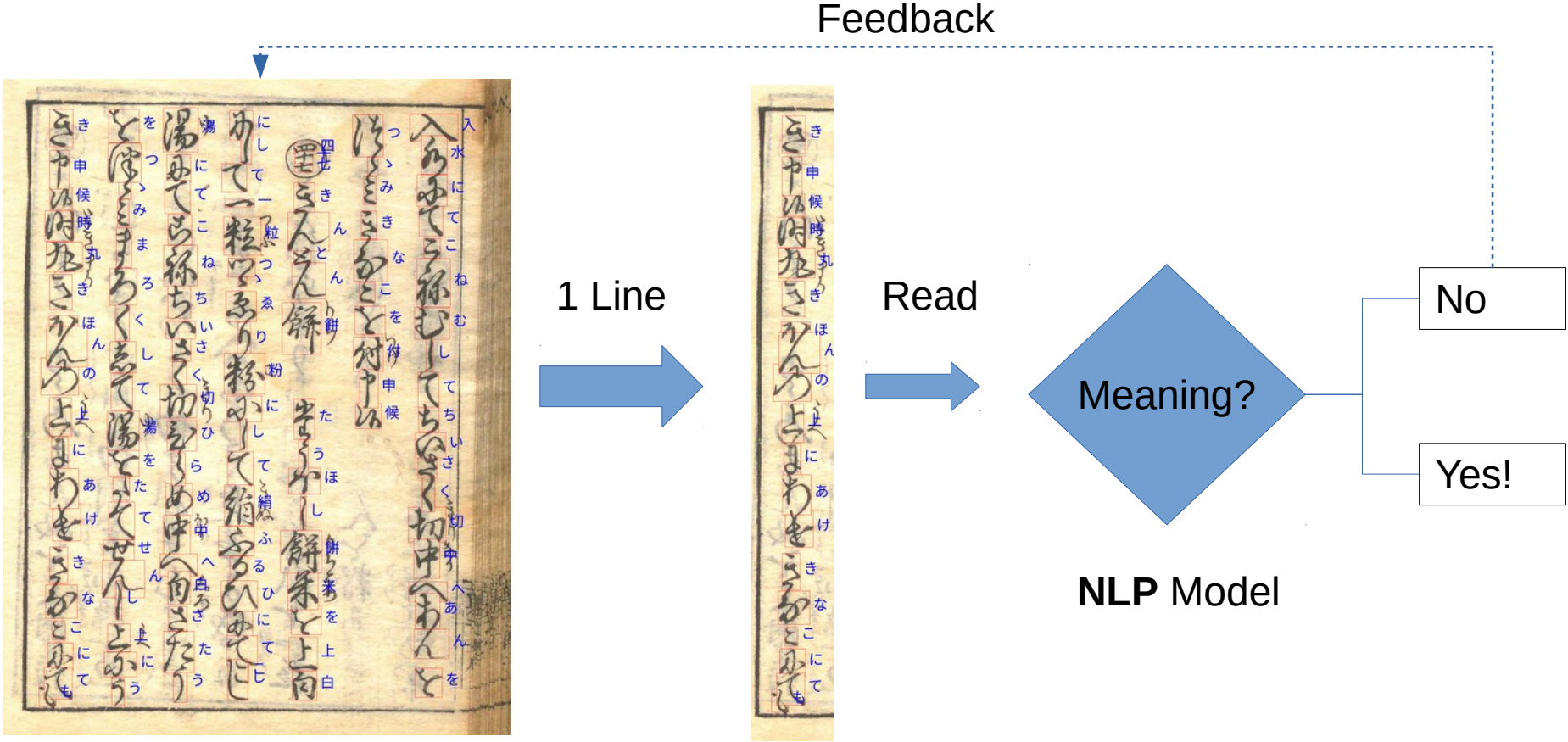
Input / Prediction / Target



Score: 0.910



Future Work



Conclusion

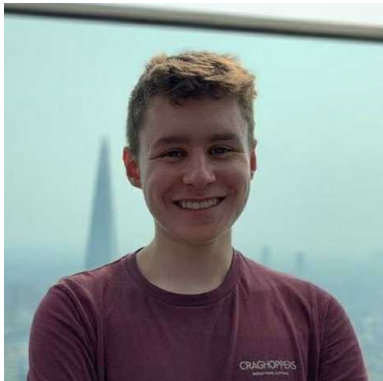
- Simple 2-stage solution.
- Only 1 GPU and Kaggle Resources.
- All in less than a day (training + inference).
- Kuzushiji will survive!

Thank you!

kaggle



ROIS-DS CODH



CODE:

<https://github.com/mv-lab/kuzushiji-recognition>

Questions:

drmarcosv@protonmail.com