Paper Title:Medical prescription classification: a NLP-based approach
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1. Summary

1.1 Motivation/purpose/aims/hypothesis

Motivation:

- Address the challenges of digitizing healthcare data.
- Streamlining medical prescription authorization and reimbursement.

Purpose:

- Improve healthcare services through effective digitization.
- Automate medical prescription classification for authorization.

Aims:

- Enhance efficiency in healthcare service provision.
- Reduce manual intervention through automation.

Hypothesis:

- Effective NLP and machine learning can automate prescription classification.

1.2 Contribution

- Digitization of Medical Prescriptions:
- Efficient Classification System:
- Automation for Authorization

1.3 Methodology

- Classification of prescriptions (ricetta rossa/ricetta bianca).
- Utilizing EAST and Tesseract for accurate text extraction.
- Implementing spelling correction for OCR errors.
- Applying syntactic rules and rule-based tagging for classification.

1.4 Conclusion

- Automation Success:
- Significant automation with only 5% requiring manual intervention.
- Achieving high effectiveness in prescription classification.

2. Limitations

2.1 First Limitation/Critique

- Around 30% unclassifiable without additional information.
- Initial rule-based mapping not fully effective.

2.2 Second Limitation/Critique

- Time-consuming and error-prone.
- Addressed in future work with machine learning.

3. Synthesis

Potential Applications:

- Enhancing efficiency in prescription handling.

Future Scopes:

- Integration of machine learning for rule management.
- Expansion of automation to other healthcare processes.