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Final project report

Advanced Machine Learning

Prof. Dr. Köthe

SIIM-FISABIO-RSNA COVID-19 Detection

| | |
|-------------------|---|
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| Field of Studies: | M. Sc. Applied Computer Science |
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Contents

| | | |
|----------|---|----------|
| 1 | Introduction and problem definition | 1 |
| 1.1 | Kaegggle Challenge | 1 |
| 1.2 | Related Work | 1 |
| 1.3 | Proposed Solution | 1 |
| 2 | Data | 2 |
| 2.1 | NIH Data | 2 |
| 2.2 | RSNA Data | 2 |
| 2.3 | SIIM COVID-19 Data | 2 |
| 3 | COVID-19 Detection | 3 |
| 3.1 | FasterRCNN | 3 |
| 3.2 | YOLO | 3 |
| 3.3 | Study-Level model | 3 |
| 4 | Evaluation | 4 |
| 4.1 | Evaluation of RESNET | 4 |
| 4.2 | Evaluation of FasterRCNN and YOLO | 4 |
| 4.3 | Evaluation of Study-Level Model | 4 |
| 5 | Proposed web application | 5 |
| 6 | Conclusion | 6 |
| | References | 7 |

1 Introduction and problem definition

1.1 Kaeggle Challenge

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1.2 Related Work

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COVIDNET beste [1]

1.3 Proposed Solution

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just a short introduction to our solution, models will be convered in 3 on page 3

2 Data

2.1 NIH Data

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2.2 RSNA Data

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2.3 SIIM COVID-19 Data

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3 COVID-19 Detection

3.1 FasterRCNN

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3.2 YOLO

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3.3 Study-Level model

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4 Evaluation

4.1 Evaluation of RESNET

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accuracy, f1, usw.

4.2 Evaluation of FasterRCNN and YOLO

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4.3 Evaluation of Study-Level Model

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5 Proposed web application

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6 Conclusion

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References

- [1] L. Wang, Z. Q. Lin, and A. Wong, “Covid-net: A tailored deep convolutional neural network design for detection of covid-19 cases from chest x-ray images,” *Scientific Reports*, vol. 10, no. 1, pp. 1–12, 2020.