

Aalto University
School of Science
Master's Programme in Life Science Technologies

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Probabilistic Precipitation Nowcasting with Bayesian Convolutional Neural Net- works

Master's Thesis
Espoo, July 20th, 2022

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Supervisor:	Professor Arno Solin
Advisor:	Terhi Mäkinen D.Sc. (Tech.)
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ABSTRACT OF
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Abbreviations and Acronyms

DL	Deep learning
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Introduction

1.1 Problem statement

1.2 Structure of the Thesis

Chapter 2

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2.1 Precipitation Nowcasting

2.1.1 Weather radar and radar products, other observations and data

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VAE, BCNN, etc

2.3 Probabilistic approaches to atmospheric science ML

Lit review

Chapter 3

Methods

3.1 Dataset

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3.2.1 Metrics

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3.3 Model

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Chapter 5

Discussion

- 5.1 Validity of results, how good are they?
- 5.2 What could we learn from uncertainty; did we achieve goals?
- 5.3 What would have to be improved, potential problems in the study?

Chapter 6

Conclusions

Bibliography

Appendix A

First appendix

This is the first appendix. You could put some test images or verbose data in an appendix, if there is too much data to fit in the actual text nicely.

For now, the Aalto logo variants are shown in Figure A.1.



(a) In English



(b) Suomeksi



(c) På svenska

Figure A.1: Aalto logo variants