Title

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Abstract

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Acknowledgements

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List of Acronyms

API   application programming interface.

CMOS   complementary metal–oxide–semiconductor.

DC   directional coupler.

DMM   Diagonal Matrix Multiplication.

FLOP   floating point operation.

FLOPS   floating point operation per second.

FoM   figure of merit.

GPU   graphical processing unit.

IL   insertion loss.

ML   machine learning.

MNIST   modified national institute of standards and technology.

MSE   mean squared error.

MZI   Mach-Zehnder interferometer.

NN   neural network.

OMM   optical matrix multiplication.

ONN   optical neural network.

PCA   principle component analysis.

PS   phase shifter.

ReLU   rectified linear unit.

SVD   singular value decomposition.

Chapter 1

Introduction

1.1 Thesis objective

1.2 Thesis organization

1.3 Research contributions

1.3.1 Journal publications

1.3.2 Paper contributions

1.3.3 Open source code contribution

Chapter 2

Chapter Two

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Subsubsection 1

Chapter 3

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Another Chapter

Chapter 5

Conclusion

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Appendix A

Equations

$$E = M \cdot C^2 \tag{A.1}$$

Appendix B

Tables