

# Introduction to Deep Learning for Scientists and Engineers

Abhijat Vatsyayan <sup>1</sup>

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# Summary

**1** Introduction and plan

**2** References

- Part I
  - Problem definition (rely on supervised learning)
  - Compute graph and gradients
  - A little about deep learning libraries.
- Part II
  - Need for different architectures
  - Convolution networks
  - Recurrent networks
- Not covered
  - Diagram of neurons
  - History
  - Recent advances and business context
  - Tutorial on pytorch or keras
- Expectation and whats next

# References



Automatic differentiation in machine learning: A survey

Atilim Gunes Baydin, Barak A. Pearlmutter & Alexey Andreyevich Radul

*arxiv* <http://arxiv.org/abs/1502.05767>