

## [The Foundations of Deep Learning](#) ([Geoffrey Hinton](#), Feb. 2018)

Geoffrey Hinton is a pioneer of deep neural networks: he applied the back-propagation algorithm to multi-layer neural networks in ca. 1985.

Geoffrey Hinton is head of the Google Brain team in Toronto and professor of computer science at the University of Toronto.

- basics about [neural networks and backpropagation algorithm](#)
  - [speech recognition](#)
  - [image recognition](#)
- [recurrent neural networks](#) (RNNs)
  - [language translation](#): source language » thought » target language
    - ["better use bitmaps of Chinese symbols"](#)
  - [textual description of what is shown in an image](#) ("that's the dream of AI, to be able to look at a picture and say what's in it...if you can do that you are really on to something")

### [brain versus artificial NN](#)

- [medical image analysis](#)
- [prediction of molecule properties](#)