



From Mathematician to Data Scientist



My Journey from Mathematician to Data Scientist



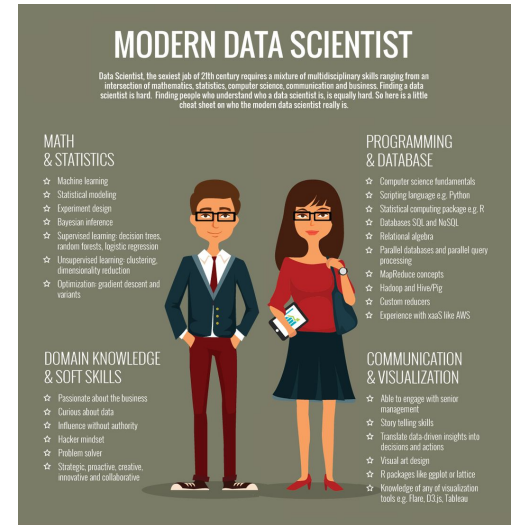
My assumption is

you're here



THE BEST THESIS DEFENSE IS A GOOD THESIS OFFENSE.

you want to get here



MarketingAnalytics.com is a group of practitioners in the area of e-commerce marketing. Our fields of expertise include marketing strategy and optimization, customer tracking and an in-depth analytics capabilities analysis and e-commerce data warehousing and big data systems marketing. Contact us at info@marketinganalytics.com or call us at 1-800-368-3688.

Marketing
ANALYTICS



Some Questions you Might have

Does being a mathematician help?

Will I need to learn anything?

How do I actually land a data scientist job?



Some Questions you Might have

Does being a mathematician help? YES

Will I need to learn anything? YES

How do I actually land a data scientist job? It's complicated, but doable



Some Questions you Might have

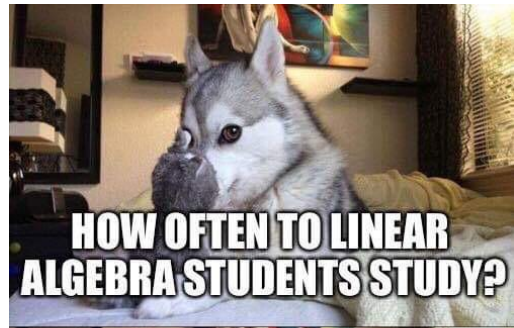
Does being a mathematician help?

Will I need to learn anything?

How do I actually land a data scientist job?

You know the Math

- Probability
- Linear Algebra
- Calculus
- Optimization
- Information Theory
- Geometry
- Topology



You are comfortable with research papers

REVIEW

Deep learning

Yann Lecun¹, Jérôme Bengio², Geoffrey Hinton³

Deep learning allows computational models that are composed of multiple processing layers to learn representations of data with multiple levels of abstraction. These methods have garnered attention from a wide variety of domains in computer science, such as image recognition, object detection, machine translation, natural language processing, speech recognition, computer vision, social network analysis, bioinformatics, computational biology, and others. This paper surveys deep learning models and methods for learning such models, and discusses the challenges of training such models. We also review recent work on deep learning models for image, speech, and audio, where recent work has shown light on sequential data such

as video. We also review recent work on deep learning models for natural language processing, such as machine translation, text classification, and sentiment analysis. We also review recent work on deep learning models for computer vision, such as image classification, object detection, and image segmentation. We also review recent work on deep learning models for speech recognition, such as speech-to-text and text-to-speech. We also review recent work on deep learning models for audio processing, such as audio classification and audio synthesis.

Representation learning is a set of methods that allows machines to learn useful representations of data without manual intervention. These representations are used for a wide variety of tasks, such as image classification, object detection, and image segmentation. These representations are also used for natural language processing, such as machine translation, text classification, and sentiment analysis. These representations are also used for computer vision, such as image classification, object detection, and image segmentation. These representations are also used for speech recognition, such as speech-to-text and text-to-speech. These representations are also used for audio processing, such as audio classification and audio synthesis.

Yann Lecun, 733 Route 9W, New York, NY 10994, USA; yann@nyu.edu
Jérôme Bengio, 480 Avenue du Parc, Montréal, QC H3T 2G4, Canada; jerome.bengio@umontreal.ca
Geoffrey Hinton, 2373 Main Street West, Toronto, Ontario M2M 1A3, Canada; geoffrey.hinton@utoronto.ca

arXiv:2005.14165v4 [cs.CL] 22 Jul 2020

doi:10.26434/chemrxiv-2020-0510

Language Models are Few-Shot Learners

Tou B. Brown¹, Benjamin Mann², Nick Ryder³, Melanie Subbiah⁴

Jared Kaplan¹, Prithvi Dhariwal¹, Arvind Noveckiy¹, Pranav Shyam¹

Amelia Ahl¹, Saarthi Agarwal¹, Ariel Herbert-Voss¹, Gauthier Kremer¹

Reuben Child¹, Aditya Ramesh¹, Daniel M. Ziegler¹, Jeffrey Wu¹

Christopher Hesse¹, Mark Chen¹, Eric Sigler¹, Chloé Winter¹

Benjamin Chess¹, Jack Clark¹

Sam McCandlish¹, Alec Raff¹, Doy Sanku¹

OpenAI

Abstract

Recent work has demonstrated substantial gains on many NLP tasks on a large corpus of text collected by fine-tuning on a specific task. In addition, this method still requires task-specific fine-tuning. We show that by using a single model to learn a large number of tasks, we can achieve superior performance on many NLP tasks, including text classification, text summarization, and text-to-text transfer. We show that this is achieved by using a single model to learn a large number of tasks, and that this is achieved by using a single model to learn a large number of tasks.

¹OpenAI

²Johns Hopkins University

³Google

⁴Facebook

Batch Normalization: Accelerating Deep Network Training by Reducing Internal Covariate Shift

Ilya Sutskever

James Hensman

Aravind Srinivas

Google

2015

arXiv:1502.03193v1 [cs.LG] 12 Feb 2015

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100



Some Questions you Might have

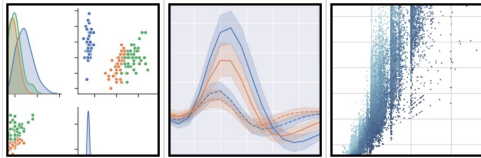
Does being a mathematician help?

Will I need to learn anything?

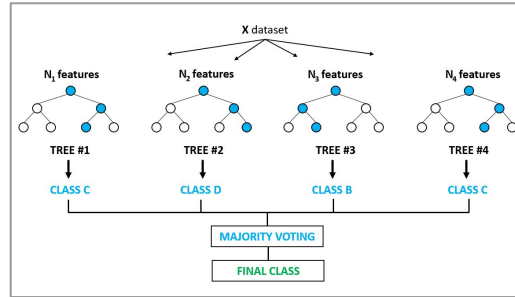
How do I actually land a data scientist job?

Be Familiar with the Techniques

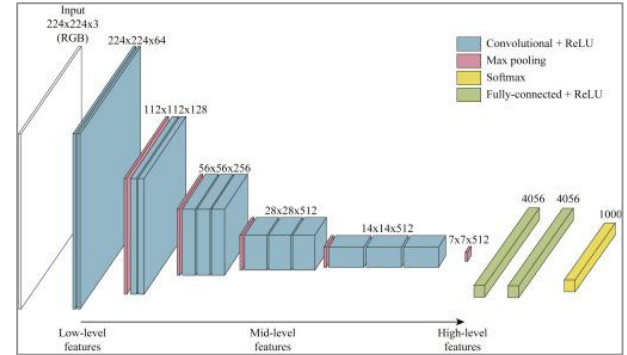
Data Visualization



Tree Algorithms



Neural Nets



... and so many more.

Learn the Languages and Popular Packages

Languages



Data Handling



Visualization



Machine Learning



Learn the Languages and Popular Packages

Languages



Data Handling



Visualization



Machine Learning





Challenge Yourself To Learn

Data Science Contests



Programming Challenge sites

**Project
Euler**





Some Questions you Might have

Does being a mathematician help?

Will I need to learn anything?

How do I actually land a data scientist job?



Data Science Meetups

Exposure to latest techniques and tools

Meet similar people

Hear about open jobs

STAY FOR THE SOCIALIZING



<https://www.meetup.com/LearnDataScience/>



Questions?



π