



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

MODERN DATA SCIENTIST

Data Scientist, the sexiest job of 21st century requires a mixture of multidisciplinary skills ranging from an intersection of mathematics, statistics, computer science, communication and business. Finding a data scientist is hard. Finding people who understand who a data scientist is, is equally hard. So here is a little cheat sheet on who the modern data scientist really is.

MATH & STATISTICS <ul style="list-style-type: none">Machine learningStatistical modelingExperiment designBayesian inferenceSupervised learning: decision trees, random forests, logistic regressionUnsupervised learning: clustering, dimensionality reductionOptimization: gradient descent and variants	PROGRAMMING & DATABASE <ul style="list-style-type: none">Computer science fundamentalsScripting language e.g. PythonStatistical computing package e.g. RDatabases SQL and NoSQLRelational algebraParallel databases and parallel query processingMapReduce conceptsHadoop and Hive/PigCustom reducersExperience withaaS like AWS
DOMAIN KNOWLEDGE & SOFT SKILLS <ul style="list-style-type: none">Passionate about the businessCurious about dataInfluence without authorityHacker mindsetProblem solverStrategic, proactive, creative, innovative and collaborative	COMMUNICATION & VISUALIZATION <ul style="list-style-type: none">Able to engage with senior managementStory telling skillsTransferable data-driven insights into decisions and actionsVisual art designR packages like ggplot or latticeKnowledge of any of visualization tools e.g. Flare, D3.js, Tableau



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

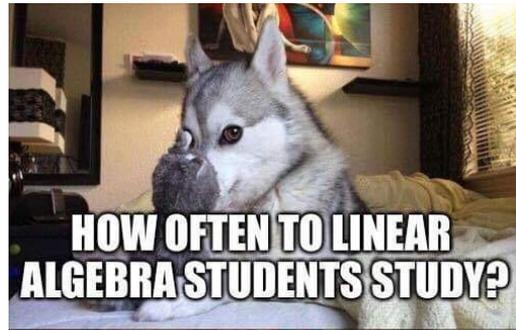
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You know the Math

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





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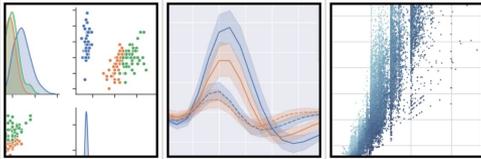
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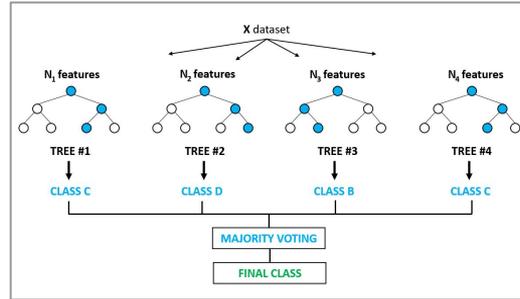
How do I actually land a data scientist job?

Be Familiar with the Techniques

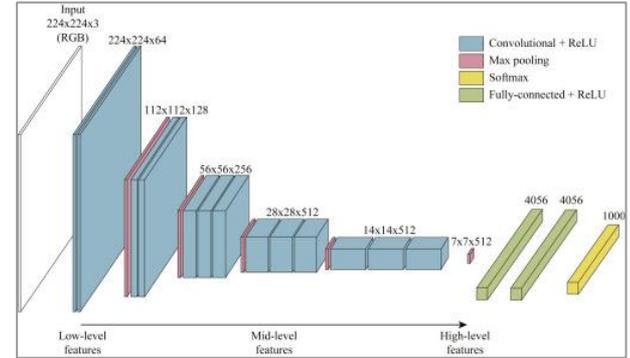
Data Visualization



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**





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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?



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