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Homework 1 CS 334 - Algorithms of Machine Learning BSU Fall 2020

1 Data Scientist vs Machine Learning Engineer?

(a) How are “Data Scientist” and “Machine Learning Engineer” similar? Where do they overlap in their skillsets? Responsibilities?

Both data scientists and machine learning engineers work with algorithms and computer code. Both of them require solving problems and good communication skills to explain the results. Both data science and machine learning deal with a model. Both have comparable skills in programming and the tools they use. consisting of SQL, Python, and GitHub for example. Machine learning helps the data scientist’s analysis.

(b) How are they different? Where do their skills diverge? How might their responsibilities differ in a given corporate or research environment?

Data scientists research and analyze data and are more statistical/mathematical oriented. They are about processes that extract data from other data. Machine learning engineers build the systems and algorithms for people working with data. They give the computers the ability to learn from data. In a corporate environment ideally they would work together to accomplish a task.

(c) Which path interests you, and why? Would you rather be a Data Scientist? A Machine Learning Engineer? A Statistician? Do you enjoy research?

I’m primarily interested in algorithmic finance. I’m more of an investor than a trader, i.e., I prefer a longer time frame and I’m not interested in very short term or high frequency trading. However, I want to make my trading more statistical and probability oriented and less discretionary and I believe I can do this using these algorithms. I have some clear ideas of models I want to build using Python and I’m also open to what the algorithms I learn here might suggest.

Why? Because I haven’t got forever to make some money and it interests me to do it this way. Yes, research interests me. I’m finding this a lot more fun and interesting than I thought it would be when I started.

(d) What I hope I get out of this class is proficiency in selecting and coding the models so I can use them right away when I finish. I’m really interested in some of the later homework projects as it appears I might be able to test out one of my ideas as part of it. .

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