Why Data Science?

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DESCRIPTION

As businesses continue to transition to autonomous & cloud based database solutions, routine administrative and infrastructure tasks - such as provisioning new databases, upgrading or patching existing databases, tuning queries, and making backups - **are no longer necessary human tasks**. Therefore the role of a Database Administrator is evolving to become more of a **Data** Administrator. By shifting the focus of the DBA program away from administrative tasks and into a forward thinking comprehensive **data-first** approach - MNTC will be on the leading edge of a market already desperate to find skilled workers.

PAIN POINTS

DBA jobs have only increased by around 6,000 in the last **20 years** - compared to the rise in number of other data and IT jobs this is **supremely low**. Even though there is more data, and databases in the world today than ever before, the number of DBA jobs are not keeping pace with the volume. Why? Automation. Additionally, the **advisory board** has mentioned in EVERY meeting all the way back to 2012 the need for graduates to actually understand the **data itself and not just how to maintain a database.** They've cited that they need employees that are **excel** 'gurus', who have **analytical and problem solving skills**, and who understand the importance of data and the business decisions it drives.

SOLUTION

While learning the administrative tasks associated with databases is still important, it is no longer **MOST** important. Having a deep understanding of how to work with the data itself is the skill that employers are finding lacking in the market right now. According to the annual Robert Half Technology Salary report for 2020 **67% of all IT Managers said they want to expand their teams in areas such as business intelligence**, but 89% reported challenges in recruiting that talent. For organizations seeking professionals with experience in emerging areas like **machine learning, AI, and data science** the challenge is even more difficult. **This talent is exceedingly rare**. Of the top 14 technology positions in high demand included are: AI Specialists (programmers), Business Intelligence Analysts, Data Specialists (engineers, scientists, visualization experts), IoT specialists, and Machine Learning Specialists. Not on the list? Database Administrators or Developers. Thus, **we need to start teaching subjects in the Database program that are aligned with the demand**.

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STRATEGY

The first half of the program is all about working with large data sets. Starting with an advanced Excel course, and then an analytics and decision making course. Students will learn about data and data management **before** pulling back the curtain to learn about database functionality and administration. A large focus will also be on creating effective **data visualizations** and presentations. The second half of the program then goes even further and about **data mining** and **machine learning**. Within the curriculum we will be using the same industry tools being utilized by local employers currently hiring for data analysts. Up until now, most data scientists and employers assumed one needed at least a masters degree in statistics or a related mathematical field. However, this is no longer the case. Data science topics can be highly mathematical, but just like you don't have to know how to build an engine to drive a car - there are tools available that "hide the math" - with these tools it is easier for students to understand mathematical techniques like linear regression without having to know the mathematics behind them.

ENTRY LEVEL SALARIES

- Big Data Engineer: $130,000
- AI Architect: $120,250
- Data Architect: $119,750
- Data Scientist: $105,750
- Data Modeler: $80,750
- Business Intelligence Analyst: $87,500
- Data Analyst: $83,750
- Database Administrator: $79,250

DEMAND

In LinkedIns 2020 top 15 emerging jobs report the #1 job with a **74% annual growth rate** is **Artificial Intelligence Specialist/Machine Learning Engineer**. #3 with a 37% annual growth rate is Data Scientist. #8 is Data Engineer with a 33% annual growth rate.