Entry-level Associate Degree Data Analyst Technician[1]

Job Description (Draft 11-18-15)

Overview

A successful entry-level associate degree Data Analyst Technician has three functional areas of skills: working with structured data, working with unstructured data, and design and requirements of databases.

Skills/Abilities of an Entry-level Associate Degree Cybersecurity Technician
1. Query Language 2. Database Fundamentals 3. Data Structure 4. Business Intelligence 5. Fundamental programming language

For the following five skills/abilities, the primary tasks are identified.

Skill/Ability 1. Query Language (high priority)

1.01 Write SQL code
1.02 Be able to complete a structured query language test

Skill/Ability 2. Database Fundamentals (high priority)

2.01 Conduct relational database modeling
2.02 Knowledge of transactional and dimensional databases
2.03 Focus on structured data systems (present)
2.04 Focus on unstructured data systems (future)

Skill/Ability 3. Visualization and Presentation (high priority)

3.01 Basic reporting
3.02 Basic presentation and visualization of data
3.03 Exposure to reporting tools

Skill/Ability 4. Business Intelligence Concentration (high priority)

4.01 Extract data
4.02 Exposure to reporting tools
4.03 Understanding of fundamental business practices
4.04 Perform data blending
4.05 Perform statistical calculations

[1] Outcomes from Compression Planning® session held 11-17-2015 with industry representatives and Columbus State Community College faculty members

Skill/Ability 5. Data Structure

5.01 Conduct traditional ETL (extract, transform, and load)
5.02 Conduct ELT (extract, load, and transform)
5.03 Learn an ELT tool for data provisioning

Skill/Ability 6. Fundamental Programming Language

6.01 Progression of building a solution

General Knowledge
GN-01 Solve business problems using data
GN-02 Develop requirements
GN-03 Create framework for understanding tools (SQL frame of reference)
GN-04 Basic mathematics and statistics
GN-05 Microsoft Office (Excel and PowerPoint)
GN-06 Flexibility
GN-07 Adaptability
GN-08 Think, problem solve, and teach themselves

Possible Courses
PC-01 Challenging coding
PC-02 Project-based learning/teamwork
PC-03 Capstone course: cradle to grave data analysis
PC-04 Capstone course: real world project
PC-05 Consider two tracks: Track 1: Data Analytics Track 2: Business Intelligence

Additional Comments
1. Breakdown the aversion to hiring students earning associate's degree
2. Be able to show the employer that is a student is job ready; provide projects and real-world experiences
3. Determine ways to teach critical thinking
4. Focus on marketing to get students into the pathway
5. Heavy emphasis on experiential learning
6. The bulk of the work is in data warehousing; need to rename and brand appropriately
7. Promote the two specializations and point out there are important jobs in both areas
8. Advanced SQL skills are important and can translate into learning in the other areas
9. Map the degree to different job titles
10. The traditional mix in a team: 50% ETL/raw data 10% Data science 15% Business intelligence 25% Data convergence
11. Too advanced for the associate degree: Data cleansing Dimensional modeling Advanced graphics and visualization