AWS Skills to Jobs

Data Integration Specialist/Analyst Competencies

Skill/Competency Categories

Cloud Computing/Networking
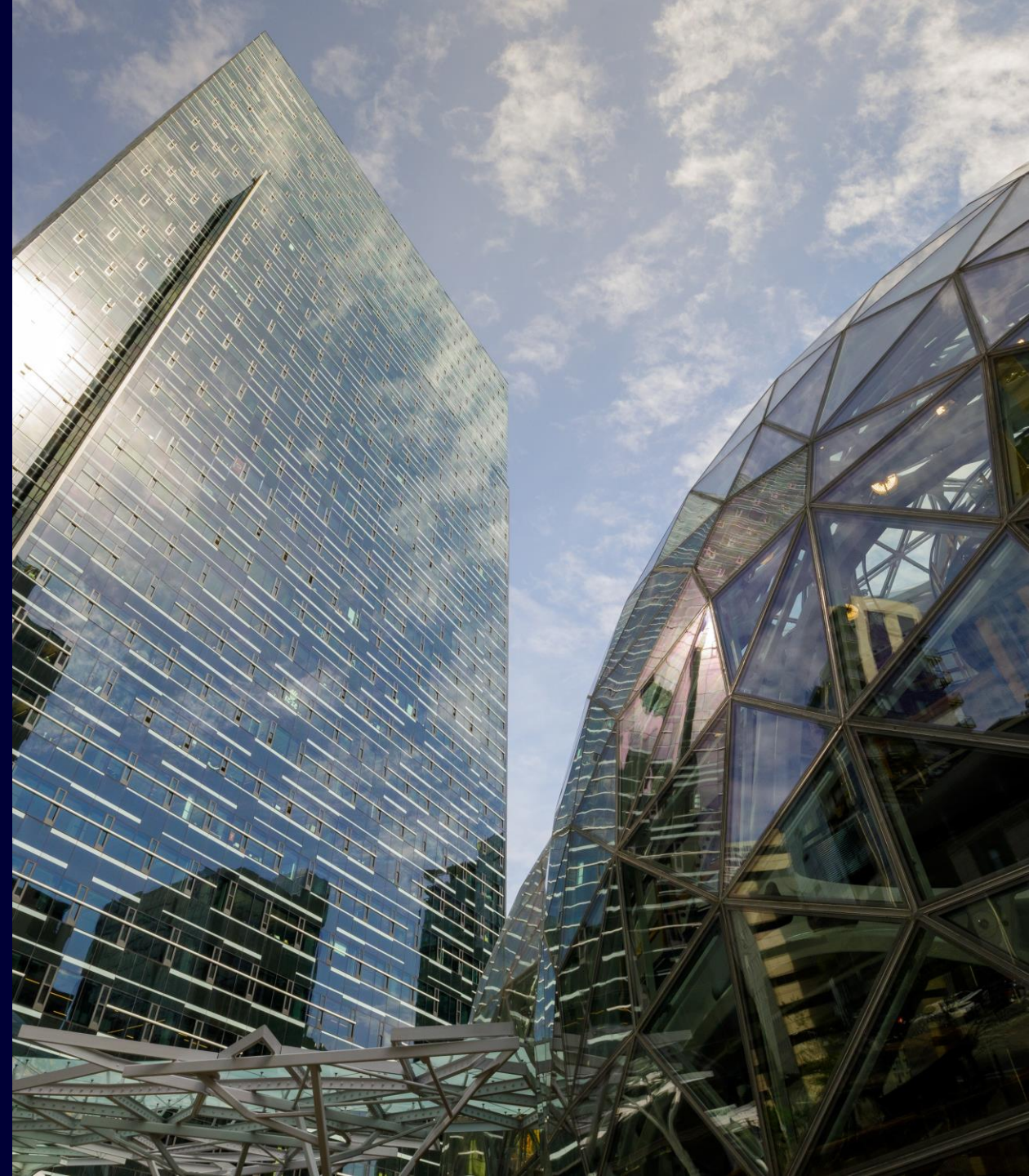
Data Preparation

Data Transfer & Security

Business Intelligence Tools

Coding

Problem Solving

Communication

Category: Cloud Computing/Networking
Skill/Competency Statements

Understand general cloud computing concepts, including Compute, Storage, Security, Databases, and Well-Architechted Framework
Determine proper allocation of cloud resources and apply necessary changes, based on performance data
Evaluate costs associated with data acquisition, transfer, and provisioning from various sources into the collection system (e.g., networking, bandwidth, ETL/data migration costs)
Assess the tradeoffs between various ingestion services taking into account scalability, cost, fault tolerance, latency, etc.
Understand the basics of networking (e.g., process communication, sockets/ports, load balancers).
Support application and environment upgrades, new implementations & patches, as required.

Category: Data Preparation

Skill/Competency Statements

Use a SQL database platform (i.e. SQL Server, Oracle, MySQL, PostgreSQL)to import data from disparate sources, including a web API, and merge data based on a unique identifier
Use a SQL database platform (i.e. SQL Server, Oracle, MySQL, PostgreSQL)to import data from disparate sources, including a web API, and merge data based on a unique identifier.
Use a SQL database platform to find missing data using techniques such as ISNULL() AND COALESCE() and fill or remove values as needed in context.
Use a SQL database platform to find and remove out-of-range or duplicate values and search for values with a specified pattern.
Use a SQL database to aggregate and filter data.

Category: Data Transfer and Security

Skill/Competency Statements

Use a SQL database to aggregate and filter data
Apply information security standards, policies and procedures relevant to data requirements
Use data systems securely to meet requirements of organizational procedures and legislation including principles of Privacy by Design
Store and access data in an ethical manner

Category: Business Intelligence Tools

Skill/Competency Statements

Perform descriptive data analysis using a BI tool (i.e. Tableau, PowerBI, Amazon Quicksight).
Apply advanced formulas and conditional logic using a BI tool
Determine the approporiate data visualization technique (i.e. bar chart, line graph, scatterplot, etc.) and create data visualization using a BI tool
Create replicable processes using a BI tool. (e.g. Creating dashboards that automically populate when data is imported.)

Category: Coding

Skill/Competency Statements

Code in at least 1 general-purpose programming language (i.e. Python, PySpark, Scala, PowerShell, Java, NodeJS). Python is preferred
Use code to automate processes and write maintainable, supportable, and testable code.
Perform data analytics, including inference testing, correlation, and linear regression, using standard packages (i.e. NumPy, pandas, etc.)
Determine the approporiate data visualization technique (i.e. bar chart, line graph, scatterplot, etc.) and create visuals using standard packages (i.e. matplotlib).
Understand the software development lifecycle
Use Git/ Github to storage, iteration, and version control of code
Understand Software Development Methodologies

Category: Problem Solving

Skill/Competency Statements

Identify a problem and generate possible solutions
Explore and evaluate tools and problem solving methods such as Actor analysis, Causal modeling, Problem diagrams, Uncertainty and Decision support
Determine which of the possible solutions is best given the context of the problem.
Define Computational Thinking components including abstraction, problem identification, decomposition, pattern recognition, algorithms, and evaluating solutions.

Category: Communication

Skill/Competency Statements

Present data in a clear and concise way, customized to stakeholder.
Know difference between formal and informal styles of communication and when to use each.
Speak and present with confidence and clarity.

Thank you!