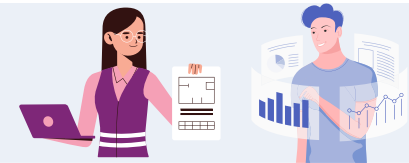# Skills Transferability Matrix

FOCAL Initiative

Database Analysts and Data Administrators

Data management can be challenging for organizations since each has distinct needs, and the necessary systems, software, and policies for effective data management can vary based on numerous factors. Database Analysts and Administrators are IT professionals who possess sharp observational and analytical skills, underpinned by a solid foundation in computer science and programming. Their expertise not only makes them adept in their current roles but also positions them well for transitions into other computer science and IT positions.

Skills

Skills are developed through training and experience, and are the practical proficiencies someone possesses. The following are top key skills database analysts and administrators employ in their work:

1. Critical Thinking
2. Complex Problem Solving
3. Programming
4. Judgement & Decision Making
5. Systems Analysis and Evaluation

Technical Knowledge

Technical Knowledge is the understanding of theory and utility of modern tools in a work environment. The following tools are used by database analysts and administrators regularly:

1. Business intelligence and data analysis software
2. Database management system software
3. Requirements analysis and system architecture software
4. Metadata management software
5. Data mining software

Tasks

Tasks are the assigned duties that an occupational group performs in their daily work. The following are the tasks database analysts and administrators most regularly encounter:

1. Develop computer or information security policies or procedures.
2. Collaborate with others to determine design specifications or details.
3. Develop procedures for data management.
4. Design computer modeling or simulation programs.
5. Create databases to store electronic data.

Abilities

Abilities refer to the innate faculties that allow workers to carry out tasks and activities. The following are the top abilities that database analysts and administrators possess:

1. Deductive and Inductive Reasoning
2. Information Ordering
3. Problem Sensitivity
4. Written and Oral Comprehension and Expression
5. Category Flexibility

Skills Transferability Matrix

FOCAL's Skills Transferability Matrices analyze the transferability of an occupation across a multitude of other occupations on the basis of similarities in **skills**, **technical knowledge, tasks,** and **abilities** as outlined by the O*Net database. It aims to show workers how to leverage their skill set in changing occupations, planning a career path, and transitioning to other industries. It also assists policy makers and educators address changing skill sets and areas of opportunity for workforce entrants in developing industries. Employers can also use this tool in reskilling or upskilling workers to circumvent skills shortages, and reduce the hiring and training challenges.

Database Analysts and Data Administrators

Occupations	Skills	Technical Knowledge	Tasks	Abilities	Total
Information systems analysts and consultants	90%	92%	48%	92%	80%
Information systems testing technicians	83%	88%	28%	89%	72%
Computer network technicians	85%	86%	18%	89%	70%
Web designers and developers	87%	74%	22%	91%	68%
Computer engineers (except software engineers and designers)	85%	77%	19%	88%	67%
Computer programmers and interactive media developers	82%	77%	9%	91%	65%
Computer and information systems managers	77%	68%	0%	89%	59%
Software engineers and designers	86%	47%	13%	86%	58%
Industrial and manufacturing engineers	85%	36%	0%	85%	52%
Electrical and electronics engineers	84%	33%	0%	84%	50%
Drafting technologists and technicians	84%	29%	0%	86%	50%
Architectural technologists and technicians	81%	24%	0%	88%	48%
Metallurgical and materials engineers	79%	20%	0%	83%	45%
Supervisors, other products manufacturing and assembly	72%	23%	0%	79%	43%
Supervisors, electrical products manufacturing	72%	23%	0%	79%	43%

After scanning over 2,600 skills, technical competencies, tasks, and abilities of each of the 500 occupations as defined by the National Occupational Classification (NOC) system, a skills transferability matrix for database analysts and data administrators is produced. In the matrix above, a high score is highlighted in green and indicates the high transferability potential of an attribute of an occupation with that of database analysts and data administrators. Lower or no transferability areas are marked in red. Analysts and administrators share high transferability with information systems professionals, such as consultants, analysts, technicians and developers, with roles ranging from software and web design to media developers. There is an observable transferability with information system management, indicating that analysts and administrators may possess the skills and abilities, as well as technical knowledge to transfer into those roles with proper training. Outside of information systems and computer technology, low transferability is observed with various technicians and technologist roles, indicating that transferability out of their specialty area may come with challenges.

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