

O*NET RESOURCE CENTER

The Gender Gap for Analytical Work in the Labor Force

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Topic Outline

Outline

1. Approach, Rationale, and Assumptions

2. Evaluation of Approach

3. Definition of 'Analytical'

4. List of Occupations, Analytical Skills

5. Key Findings

Approach, Rationale, and Assumptions

Approach

By researching on the U.S. labor market from the 2020 reports, I summarized the keywords that are considered to be analytical, and look for these keywords and required skills in job descriptions to identify 'analytical' jobs.

Rationale behind approach

After researching in the labor market, I found as new business models emerge and technologies develop, there appear to be more and more jobs that require analytical skills. In this way, we cannot identify analytical jobs by merely their titles, but by their responsibilities and skills required.

Assumptions

The job descriptions in the O*NET dataset are accurate and contain full information and can be used in identifying analytical jobs.



Evaluation of approach

Strength

- By identifying analytical jobs by skills and responsibilities rather than titles, there is less room for bias
- Research is based on the latest articles about analytical labor market

What's next

- Conduct more research on keyword selection for analytical job descriptions
- Classify analytical jobs by the amount of analytical work involved in that job
- Discover more data sources regarding job descriptions
- Investigate further on the technology required for each job

Analytical Definition

Analytical describes the process to draw meaningful conclusions from data, information, or facts. Jobs contain this process and analytical skills can be identified as analytical jobs.

analytical skills are listed in the next slide

By my definition, I found these surprising analytical occupations

- Logisticians
- Accountants and Auditors
- Training and Development Specialists
- Health Educators
- Community Health Workers
- Librarians
- [check full list](#)



Analytical skills

- Research
- Forecasting
- Problem-solving
- Data mining
- Data and metrics interpreting
- Reporting
- Organization
- Communication
- Diagnostics
- Troubleshooting
- Creativity
- Theorize
- Brainstorm
- Analysis
- Analyze

- Programming
- Discover
- logical reasoning
- critical thinking
- data analysis
- creativity

the list helps understand analytical jobs
and identify relevant keywords in
analytical job descriptions

45.35%

*employees are females in 143 identified analytical jobs, which accounts for 17.6% of total jobs provided by O*NET resource center. In contrast, 49.27% of employees are female in all occupations*

We can tell there are fewer females in analytical positions




Analytical jobs with most female employees are not traditional analytical jobs

- Human Resources Assistants
- Industrial-Organizational Psychologists
- Compensation, Benefits, and Job Analysis Specialists
- Librarians
- Paralegals and Legal Assistants
- Audiologists
- Phlebotomists
- Dietitians and Nutritionists

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- Mechanical Engineers
 - Computer Network Architects
 - Tool and Die Makers
 - Computer Network Architects
 - Electronics Engineers
 - Architectural and Engineering Managers
 - Aerospace Engineers
 - Engineers, All Other
 - Atmospheric and Space Scientists

Jobs with least female employees require more technical skills



Key findings

1. More and more jobs start to involve analytical work in their responsibilities, for instance, health educators need to analyze data and share insights with their audience, etc. As a result, we cannot define analytical work by titles, but the job responsibilities.
2. The gender gap exists in the analytical labor market, there are fewer female employees in the analytical field compare to females in all occupations. Besides, the occupations require stronger technical background have fewer females.

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