



PRAGMATIC  
—INSTITUTE—

# DATA SCIENCE

## TEAM MEMBERS





# DATA SCIENCE TEAM MEMBERS

## Data Scientist



### Key Responsibilities

- Cleans and organizes big data
- Solves business tasks using machine learning and data mining techniques

### Languages

- Coding: R, Python, Scala
- Database: SQL
- Computing: Hadoop/Spark

### Expertise

- Distributed computing (user)
- Predictive modeling
- Math and statistics
- Machine learning
- Storytelling and visualization
- Capable of working with big data

## Database Administrator



### Key Responsibilities

- Ensures that databases are available to all relevant users
- Data security
- System performance

### Languages

- Database: SQL
- Other: Java, Python
- Distributed computing tools

### Expertise

- Backup and recovery
- Database systems
- Distributed computing
- Data security
- Enterprise resource planning

## Data Analyst



### Key Responsibilities

- Collects and processes data
- Conducts basic statistical analyses
- Presents and explains results
- Supports more advanced/senior technical staff

### Languages

- Statistical: R/SAS/Stata/Matlab
- Office tools

### Expertise

- Spreadsheet manipulation and analysis
- Data visualization
- Basic math and statistics

## Business Analyst



### Key Responsibilities

- Serves as intermediary between business and technical teams
- Links data insights to actionable business decisions
- Uses storytelling techniques to communicate data science results to organization

### Languages

- Office tools
- Tableau/Splunk

### Expertise

- Knowledge of Office suite to present data science findings to management
- Knowledge of visualization tools to illustrate business problems or solutions
- Storytelling and data-driven communication
- Basic data modeling

## Data and Analytics Manager



### Key Responsibilities

- Manages data science team
- Prioritizes and manages data science projects
- Identifies and supports opportunities to use these skills throughout an organization

### Languages

- Depends on level of technical or non-technical involvement

### Expertise

- Leadership
- Project management
- Interpersonal communication
- Understanding of roles and responsibilities of teams

## Data Engineer/Architect



### Key Responsibilities

- Designs and implements data management systems to integrate, centralize, protect and maintain data sources
- Designs and maintains systems for data science staff to develop and put data science applications into production

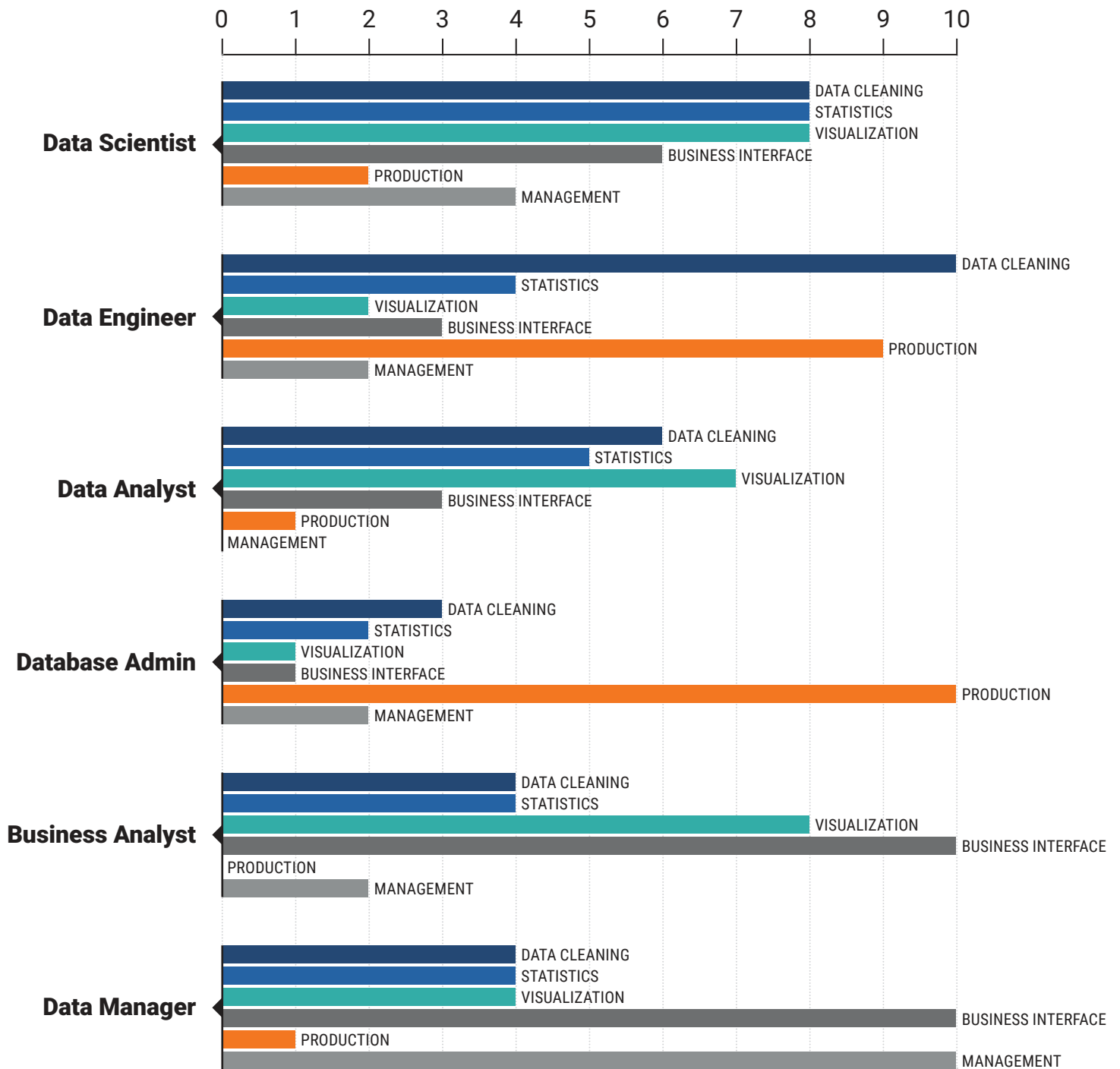
### Languages

- Database: SQL/NoSQL
- Distributed Computing: Hive, Pig
- General purpose: Python, Java, Perl
- Statistical: Matlab/R/SPSS/SAS

### Expertise:

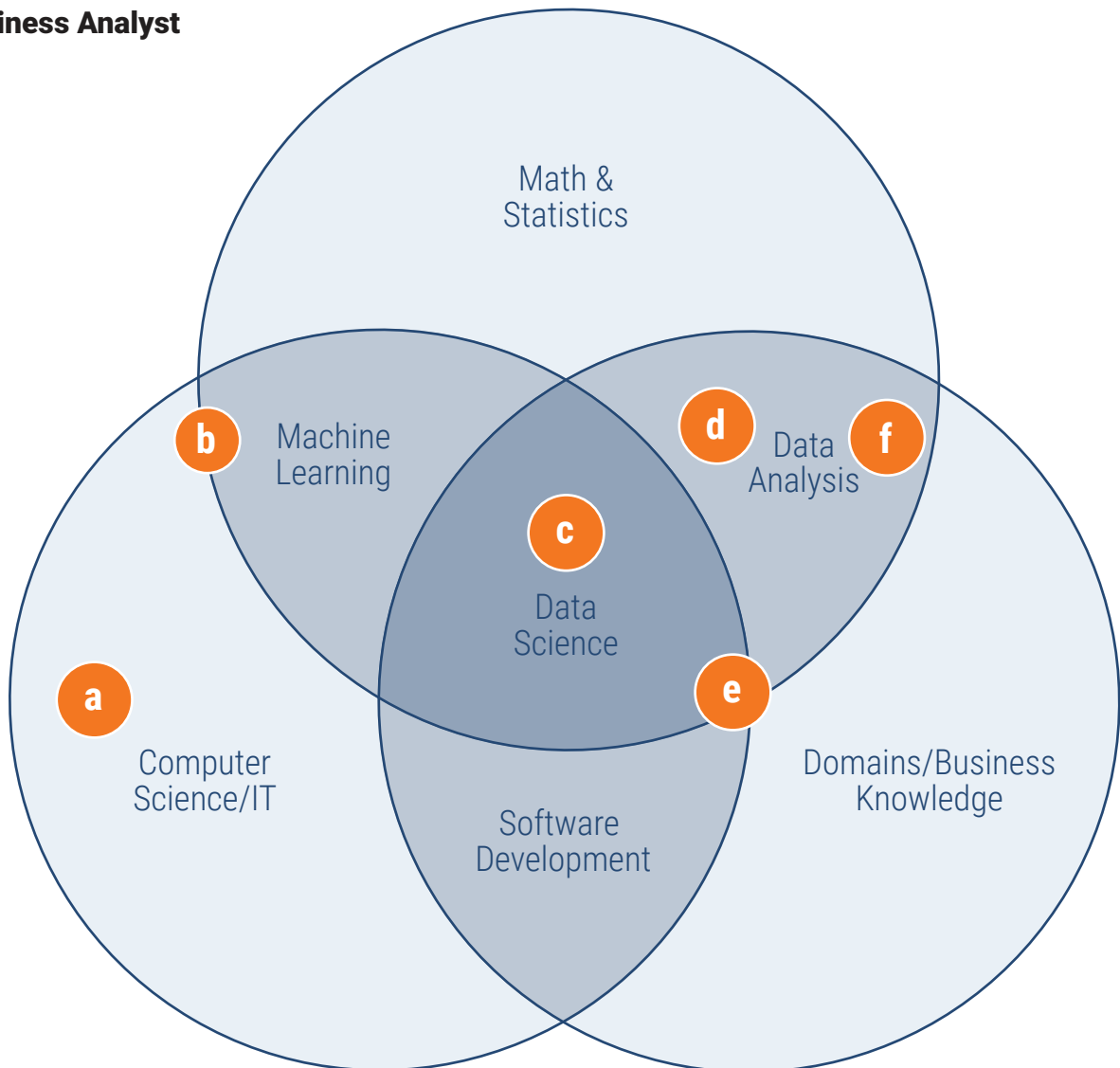
- Data warehousing
- Database architecture
- ETL tools
- Business intelligence tools
- Kubernetes/cluster management tools

# DATA SCIENCE TITLES & SKILL SETS



# DATA SCIENCE TITLES & FIELDS

- a. Database Administrator**
- b. Data Engineer**
- c. Data Scientist**
- d. Data Analyst**
- e. Data & Analytics Manager**
- f. Business Analyst**





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