

## WEBINAR 2: TAKEAWAYS

### Nuances of Data Roles and Hybrid Career Trajectories

#### Where do I want to be as a data/AI professional?



#### Common Data Roles

Note: This is not a comprehensive or complete list

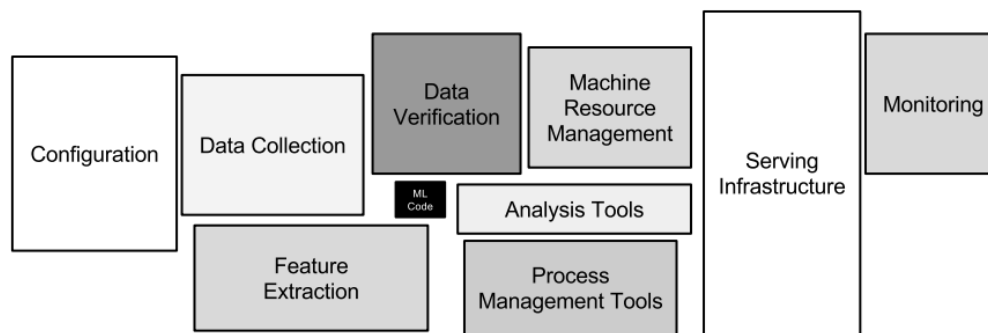
	Analyst	Data Scientist	ML Researcher	Data Engineer	ML Engineer	Team Leads	Data Consultant
Description	Using data to drive business decision making	Gather, process and generate insights from data	Gather, process and generate insights from data using ML approaches	Create the infrastructure and processes to run experiments	Create the infrastructure and processes to run ML workflows	Manage and oversee a team of data professionals	Engage in project-based work for a client
Technical skills	Statistics, data wrangling, reporting, SQL	Java, Python, SQL, math, statistics	C, C++, Python, Java, numerical methods, theoretical math, algorithm design	Software engineering, data architecture	Python, Java, R, C++, C, JavaScript, Scala, Julia, SQL	Architecture, design	Architecture, design, SQL, Python
Non-technical skills	Communication, design, data visualization, data cleaning, documentation	Research translation, presenting, project planning, design	Research translation, writing (e.g., papers), project management	Communications, documentation, data cleaning, requirements gathering	Communications, documentation, data cleaning, requirements gathering	Management, mentorship, team leadership, storytelling, presenting, project management	Research translation, presenting, project planning, design, storytelling, client management
Tasks	Clean data, visualize reports, run reports regularly, automate pipelines, present model results	Develop models and algorithms, statistical analysis, research, analyze model performance	Write research papers, implement papers and algorithms, build optimized models for problems	Build data pipelines, scale models, support production level models	Develop ML models, apply ML techniques, write production-level code, manage lifecycle, code reviews	Management of data team, communicate with stakeholders	Manage projects, communicate with stakeholders, manage clients, scope and oversee projects
Specializations	Marketing, business, sales	Marketing, business, sales	NLP, computer vision, deep learning	Version control, database optimization, training sets	Version control, database optimization, training sets	Product management, broader technical management	Consulting firms, shared services

## Examples of Hybrid Data Roles

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	Technical Architect	ML / Data Product Manager	Solution Engineer	Translator
Description	Architect high-level solutions and manage principles around projects and products	Design and build products powered by ML	Connect company products to customer needs; similar to consulting	Bridge analytics and business functions
Key skills	Database design, algorithms, range of programming languages, requirements gathering	Requirements gathering, customised discovery, design, data science project management	Architecture, database design, requirements gathering, communication, writing	Communications, familiarity with AI, leadership, client-facing
Tasks	Collect requirements, facilitate meetings to plan data flows, manage stakeholders	Interview customers/users, manage project around product development, balance tradeoffs with development/ML team	Be a product expert, meet with customers to understand how product can be used to achieve their goals	Direct client management, account management, strategic business planning, project management

## Internal ML Roles



Source: Hidden Technical Debt in Machine Learning Systems, Google, Inc.  
<https://proceedings.neurips.cc/paper/2015/file/86df7dcfd896fcdf2674f757a2463eba-Paper.pdf>

## Resources to check out

### Articles

The Power of Data Science Hybrids

<https://phaseai.com/resources/power-of-hybrid-data-scientists>

Skills and Qualities of Top Tier ML Researchers

<https://phaseai.com/resources/top-tier-ml-researchers>

Managing Oneself by Peter Drucker

<https://hbr.org/2005/01/managing-oneself>

### Videos

Navigating a data career: Academia, Data Science, Product Management

<https://phaseai.com/resources/career-data-product-management>

From Physics PhD to Applied ML

<https://phaseai.com/resources/from-phd-to-applied-ml>

Hybrid Data Scientists

<https://phaseai.com/resources/hybrid-data-scientists>