



**Skilling for the
Digital Economy:
*A Role-Based Approach***

Introduction

We are in the midst of a new Industrial Revolution. Steam drove the First Industrial Revolution, electricity drove the Second, and digital computing drove the Third. According to the [World Economic Forum](#),

“The technologies that define the Fourth Industrial Revolution (4IR) include artificial intelligence, machine learning, robotics, data science, Cloud computing, and the Internet of Things. In turn, these technologies have powered other new technologies like genetic engineering, which has transformed agriculture and medicine, and blockchain, which is transforming commerce”.

Compounding the pace of technological change are other pressures, notably the COVID-19 pandemic, that have changed how people interact, work, and do business. These pressures have also accelerated the pace of 4IR.

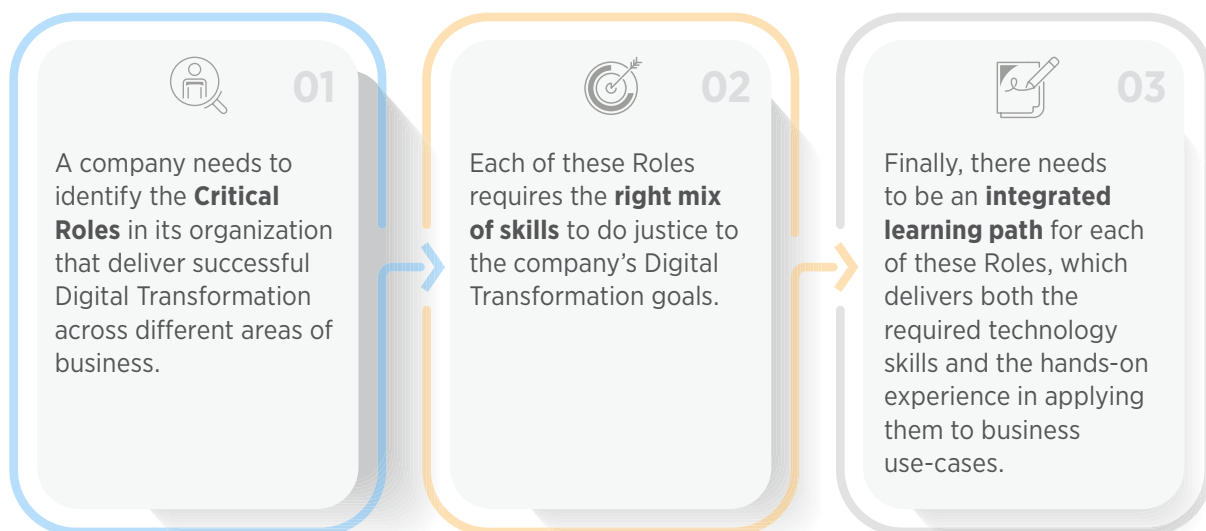
To survive, businesses have to transform their operations to increase their use of digital technologies and reduce their dependence on in-person interactions. To thrive, businesses and organizations must rethink their business models and operations, and rebuild them to take full advantage of 4IR technologies. Clearly, the organizations that will succeed and thrive are those who have access to the talent they need to navigate this transition well.

The Fourth Industrial Revolution can be described as the advent of “cyber-physical systems” involving entirely new capabilities for people and machines. While these capabilities are reliant on the technologies and infrastructure of the Third Industrial Revolution, the Fourth Industrial Revolution represents entirely new ways in which technology becomes embedded within societies and even our human bodies.

A Role-Based Approach to Digital Skilling

Simplilearn has trained over one million learners and has powered Digital Transformation training programs for hundreds of businesses across more than 150 countries. That puts Simplilearn in a unique position to understand what helps some enterprises thrive and what causes others to struggle to adapt to the 4th Industrial Revolution's fast-changing realities. Companies around the globe and across industries are investing in intelligent systems and software to automate their business processes and optimize their business models. However, one thing above all else has differentiated successful attempts at digital transformation from failures - and this is the availability of the right talent, trained in appropriate digital technologies and able to apply them to business applications.

Simplilearn follows a Role-based approach to Digital skilling. This means three things:



This Role-based approach is in contrast to a skills-based approach taken by many learning libraries, where the focus is more on a large collection of courses, each imparting a specific skill. Developing the skills base of your organization's talent might seem to be a simple matter of ordering skills-training courses out of a catalog as the need for each skill arises. However, this approach is reactive, and it leaves crucial skills unfilled while your employees take the training courses.

To put together our comprehensive Role-based skilling approach, ready to power Digital Transformation for any enterprise, Simplilearn has followed a rigorous process:

- ▶ **Map industry trends**
- ▶ **Identify Critical Roles**
- ▶ **Map the skills needed for each of these Roles**
- ▶ **Create learning paths that deliver these skills as well as the ability to apply them**



Map Industry Trends

It is essential to understand the underlying trends in each industry. This understanding helps to build a clear picture of the business model and business operation transitions affecting that industry, and in turn, gain clarity on the Roles and skills needed to drive Digital transformation in that industry.

We have looked at these four major industries closely, using our experience of working with multiple large global enterprises in these domains.

- ▶ **Banking, Financial Services, and Insurance (BFSI)**
- ▶ **Consumer Packaged Goods (CPG) and Retail**
- ▶ **Telecommunications**
- ▶ **Technology and Consulting**



Financial Trends

- ▶ Tapping deeper into data
- ▶ Personalization for frictionless transactions
- ▶ AI and machine learning
- ▶ Decisioning for customer experience
- ▶ Credit marketing acceleration
- ▶ Movement towards asset-light models of business



CPG & Retail Trends

- ▶ Omnichannel
- ▶ IoT, robots, and drones
- ▶ Hyperlocal sourcing
- ▶ Smart supply chains
- ▶ Sustainability



Telecom Trends

- ▶ AI and machine learning
- ▶ Cloud computing
- ▶ Data mining and better monetization
- ▶ APIs and seamless integrations
- ▶ 5G
- ▶ IoT



Technology & Consulting Trends

- ▶ Powering Digital Transformation initiatives
- ▶ Enterprise software to SAAS
- ▶ Data & AI applications
- ▶ Migration to Cloud
- ▶ Cyber Security - especially online
- ▶ Blockchain
- ▶ IoT and edge computing

Identify Critical Roles

Using the deep insights that we have into how companies in these industries operate and what the sectoral trends are, we have mapped the Critical Roles that drive these companies.

These Critical Roles fall into four broad categories - Digital Business, Digital Operations, Data & AI, and Technology. By collating the different organization structures across companies and industries, we have simplified this mapping of Critical Roles to serve as a framework for most organizations.

It is important to understand that each organization may name these Roles slightly differently. However, this set of Roles comprehensively covers the talent needs of any organization looking at digitally transforming their business.



37 Key Roles Powering Enterprises through the 4th Industrial Revolution



DIGITAL BUSINESS

9 Roles

▶ Business Strategy

- Business Analyst
- Business Architect
- Digital Transformation Leader
- Business Consultant

▶ Product Management

- Product Manager (coming soon)
- UX Specialist (coming soon)

▶ Digital Marketing

- Digital Marketing Associate
- Digital Marketing Specialist
- Digital Marketing Manager



DIGITAL OPERATIONS

6 Roles

▶ IT Services

- IT Service Manager
- System Architect

▶ Operations

- Project Manager
- Lean Six Sigma Expert

▶ Agile Management

- Agile and Scrum Manager
- Agile Project Owner



DATA AND AI

7 Roles

▶ Data Engineering

- Big Data Engineer

▶ Data Science

- Data Analyst
- Data Scientist

▶ Artificial Intelligence

- Deep Learning Engineer
- Machine Learning Engineer
- NLP Engineer
- AI Architect



TECHNOLOGY

15 Roles

▶ Cloud Infrastructure

- Cloud Administrator
- Cloud Architect
- Cloud Developer
- Cloud Engineer

▶ Cyber Security

- Cloud Security Professional (CCSP)
- Security Analyst
- Cyber Security Expert
- Ethical Hacker (CEH)
- Information Security Manager (CISSP, CISM)
- Information Security Auditor (CISA)

▶ DevOps

- DevOps Engineer
- Release Manager

▶ Software Development

- Full Stack Web Developer
- Quality Engineer (Automation Testing)
- Full Stack Developer



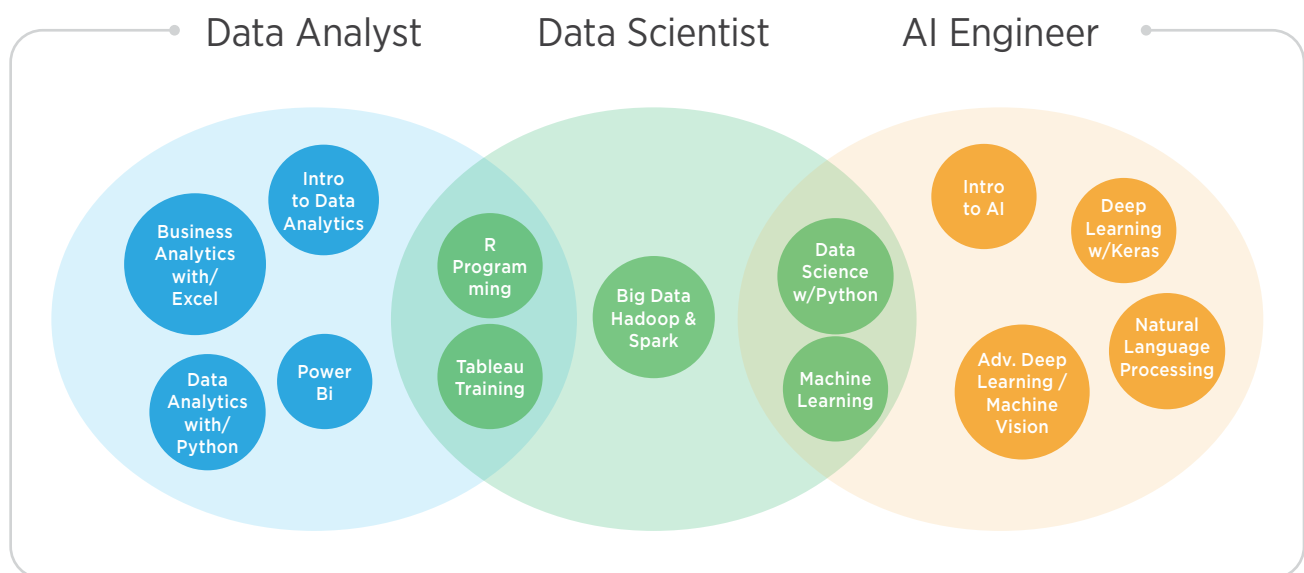
Map the skills needed for each of these Roles

Simplilearn has analyzed the skills each digital job Role requires. Each Role has a specific complement of skills that are essential to success in that Role.

The skill mapping done for each Role is based on the skills that drive successful outcomes across different organisations and gets continuously updated. As technologies change and businesses innovate, Simplilearn refreshes the skill mapping for these Roles to adapt to these shifts.

The figure below shows an example of mapping Data Science skills to Data Science job Roles. Similar skills mapping is done for each of the key Roles in the comprehensive set.

Mapping Data Science Skills to Data Science Roles



Create Learning Paths aligned to these Roles

Once Simplilearn identifies the skill set a given Role requires, we assemble a Learning Path for that Role that teaches and validates the required skills and ensures hands-on application experience through industry projects and capstone projects. With this approach, we make Digital up-skilling both outcome-oriented and easy to map to any organization's needs. The goal is to ensure that an organization has talent in all its key Roles that is well-rounded, with all the skills needed to deliver results.

The Data Scientist example illustrates the way we construct our Learning Paths. Similarly, each of the other Roles in the comprehensive set has a complete Learning Path with the right mix of skills needed to deliver results in each Role.

Example of Role-Aligned Learning Path



The Learning Path builds the learner's skills in a specific sequence, from foundational skills to skills for the Role's area of competence, to specialized skills specific to the Role. The foundational skills for a Data Scientist are the statistical tools used in data analysis. Thus the initial courses in the Data Scientist learning path introduce the real-life uses of data science, the statistical methods essential to data science work, and skills in using the R programming language in data science work.

Intermediate skills that build on the foundation and prepare for specialized domain skills include advanced R skills, Python programming skills, and skills in applying Python to data science work. Acquiring these skills allows the learner to grasp and succeed in specialized data science courses, such as machine learning and Tableau data visualization, and to complete the learning path's Capstone project.

The Learning Path may include skills from other areas of competence related to the Role. Simplilearn recognizes the merits of a workforce with T-shaped skill sets with the necessary depth and expertise in the domain of specialization, plus selected skills across all categories of Digital Business, Technology, Digital Operations, and Data and Artificial Intelligence.

The Unique Features and Benefits of Simplilearn's Role-Based Approach

Simplilearn's goal is to deliver clear, measurable outcomes that result in professionals' ability to deliver in the Roles they play. Our programs use Learning & Development best practices proven to yield high engagement and success rates.

We use a highly interactive, Blended Learning methodology that includes :



Live Virtual Classroom: Actual live instruction, with actual live classroom interaction.



Self-Paced Video Content: Video lessons learners can access anywhere, anytime.



Hands-On Labs: Exercises based on real-world, industry-based problems that require learners to apply their new knowledge and skills.

Our advanced Learning Paths feature Capstone projects to demonstrate all of the learner's new skills. The Capstone project draws on all of the skills in the learning path and requires the learner to demonstrate competence in every one of them.

Simplilearn's programs are designed in partnership with the most credible institutions across:

- ✓ The best Academic partners (Caltech, Purdue, MIT, and others)
- ✓ Business Leaders (IBM, Microsoft, AWS and others)
- ✓ Industry bodies that define skill benchmarks (PMI, Axelos, IIBA, and others)

Learners who complete the courses in their learning paths receive certifications that demonstrate industry-recognized proficiency at a work-ready level.

Simplilearn's approach is Simple, Focused, and Comprehensive.

Our Role-based learning paths provide a concise and simplified outline of the skills that will make your task as an L&D manager easier. You don't need to map your organization's job Roles to skills and then assemble sets of courses to match: Simplilearn has done that work for you.

Simplilearn has created a comprehensive set of well-defined, Role-based Learning Paths that empower the 37 critical digital economy job Roles with the skills each needs for success. We update these Learning Paths continuously to ensure they support the current state of technology.

Next Steps

When you engage with Simplilearn to provide digital skilling for your enterprise, we start with two initial steps:

- ✔ Simplilearn works with you to identify the digital economy Roles in your organization and take an inventory of the people in those Roles. We help you conduct a skills assessment to determine whether each person in your digital economy operation needs training in skills for their current Role or upskilling into some other Role that needs to be filled.
- ✔ After taking a Roles and Skills Inventory, Simplilearn works with you to configure an Enterprise Skilling Program to provide sufficient training to fulfill your skilling needs in a way that fits your organization's culture and operating style. The Enterprise Skilling Program takes account of your team members' current skill levels and geographic locations, and your organization's preferred way of managing learning and development.

Given the pace of Digital Transformation, the best time to get started on digital skilling for your organization is now. Contact Simplilearn to find out how.



INDIA

Simplilearn Solutions Pvt Ltd.

53/1 C, Manoj Arcade, 24th Main,
Harlkunte

2nd Sector, HSR Layout
Bangalore - 560102

Call us at: 1800-212-7688

USA

Simplilearn Americas, Inc.

201 Spear Street, Suite 1100,
San Francisco, CA 94105
United States

Phone No: +1-844-532-7688

www.simplilearn.com