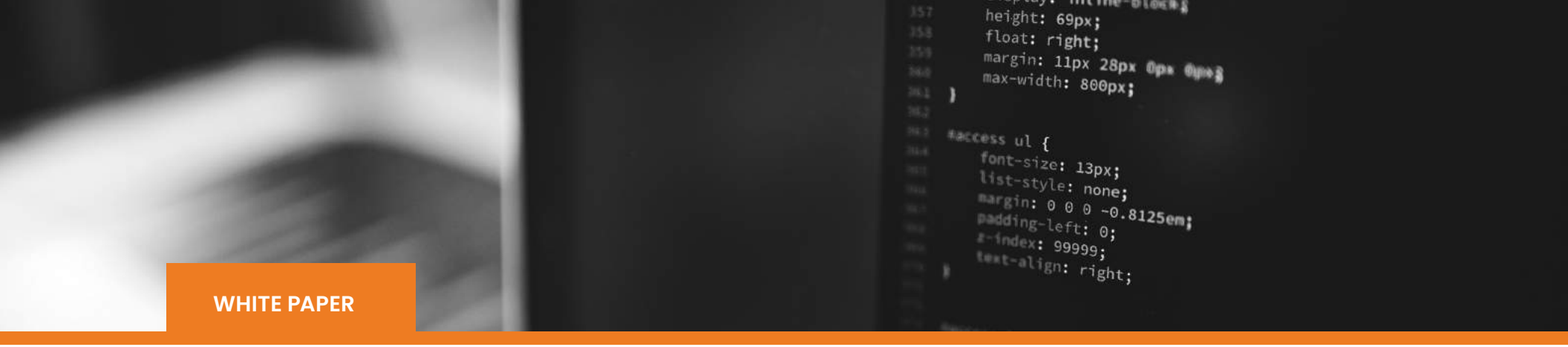

WHITE PAPER

How Role-Based Training Prepares You for the Next Career Move

EnterpriseTraining Solutions™

TECH & DEVELOPER PROFESSIONALS: YOU NEED LIFELONG LEARNING

Searching for a job as a technology or developer professional can feel paradoxical. Job growth and outlook across the field is good, and there are more open positions than people to fill them. Yet competition for spots at top tech employers is fierce with many people jostling for the same roles.

At the same time, the workplace is going through big changes as boomers retire and companies scramble to incorporate the latest tech. To make these technologies and applications work, companies need smart people in the right roles to learn new skills and processes to fully take advantage of the advancements they offer.

For tech and developer professionals, the message is simple: Always be learning. Seek out training programs through your company to learn the skills you need to take on new technology roles. Be curious, solve business problems for your company, and use these skills and knowledge to advance your career.

The pay for solutions architects, web designers, and software engineers are up 3.7%, 3.4%, and 2.7%, respectively.

TODAY IT'S ABOUT SPECIALIZED ROLES, NOT SPECIALIZED SKILLS

The world of technology is changing too fast for any one skill to remain relevant. Twenty years ago, a specialized skillset was all you needed to land a secure, well-paying job. You could become an SAP expert or an Excel pro and plan on making a career out of it. Today, the pace of change means having one deep area of expertise is not enough.

Glassdoor's research affirms this trend. Their pay reports show jobs which primarily require one skill are paying less year over year. Java developers are down 0.1%, while web developers are down 0.9%. Conversely, we see a trend in the opposite direction for more dynamic jobs. The salaries for roles with complex demands that require proficiency in broader skill sets and knowledge bases are growing. The pay for solutions architects, web designers, and software engineers are up 3.7%, 3.4%, and 2.7%, respectively.1

Many of today's most promising jobs didn't exist ten years ago. Businesses' inability to find talent with the highly technical, cutting-edge skills needed to do these jobs is making it impossible to implement what otherwise could be today's most promising technologies.

1 "Why Your Current Skill Set Might Not Be Enough". Emily Moore, Glassdoor.com, October 4, 2017.

Jobs like data wrangler, data scientist, full stack developer, machine learning architect, AI developer, SecOps engineer are a few of these jobs in their infancy. These roles require a blend of technical know-how and soft skills that make them hard to fill. Yet the career potential and pay for these professions is staggering, and top employers are willing and eager to train their best tech people to fill these roles.

Meet the data scientist: Average salary of $120,971 and 3.6% year-over-year salary growth.

MEET THE DATA SCIENTIST

Let's take a closer look at what's often lauded as today's best role: Data scientist.
Organizations need data scientists to make sense of the massive pools of data they're collecting. Without the right people in the right roles, big data's promise of delivering insight on customers, markets and operations is impossible. And unfortunately, this is the case for the majority of companies today. Most companies' analytics programs are doing a bad job of saying what has already happened and what is currently happening, let alone what will happen. Businesses that struggle to categorize the past and understand the present certainly aren't doing any accurate future forecasting.

A lot of this has to do with the ability to determine whether data is accurate. Data professionals have to maintain a fanatical focus on clean and accurate data or else the insights are useless, and the AI-driven future companies dream of won't become reality. For technical professionals who do this well, handsome pay and career options are firmly on the table.

The highly academic approach, plus technical know-how that data scientists need to be successful is part of the reason they're so scarce, and so well compensated. With an average salary of $120,971 and 3.6% year-over-year salary growth, it makes sense the role is Glassdoor's Number One Job and also one of their 10 Job Titles with Fastest Growth." 2, 3

Companies need more data scientists than higher education is providing, and plenty are taking training into their own hands, or trying to. But working toward "data scientist" is a lofty goal that proves fruitless without the right sequence of instruction. The problem is that most educational efforts focus on the end goal without the preparation employees need to get there. Rather, your employer needs to help you build the skills to become a confident data analyst, data wrangler, then move into data operations before becoming a data scientist. They need a solution to identify the right place for learners to start and then provide a clear path to mastery with reliable skill development.

2 "Data Scientist Salaries in the United States." Indeed.com, March 30, 2019.

3 "Job Market Report: U.S. Job Openings Rise 1.4 Percent in June, Pay Up 1.7 Percent." Daniel Zhao, Glassdoor.com, July 2, 2019.

SEE BEYOND THE SKILL GAP WITH ROLE-BASED TRAINING

We know that today's roles need training on a broad range of topics, so how do you get the training you need to take on a new role? Trying to cobble together a learning curriculum when you're dealing with the demands of day-to-day business life is unlikely. You need a training solution that you can pick up and put down, fitting into the cracks of your calendar.

One problem is that much of the technology and developer training that exists today is focused on a specific technology, like learning a single programming language such as Python. While Python is surely a useful language for technology and non-tech professionals alike, a broader and more comprehensive focus better primes you to take on new roles at your company.

Role-based training focuses on understanding specific job roles and then acquiring all the skills you need to excel in the position, including technical and non-technical skills.

Let's go back to our data scientist example. Say you're a current data analyst working for a growing organization that has data scientist roles available and you want the job.

You know you're a good fit for a data science role because you've demonstrated your:

- Competency in statistics and math
- Familiarity with SQL
- Ability to analyze, model and interpret data using tools like Excel
- Problem-solving skills
- Knowledge of your company and its lines of business
- Logical mindset
- Accuracy and attention to detail
- Written and verbal communication skills

You've got the baseline technical skills, human-centric soft skills, and the mindset you need for this job. You're dead set on landing it but don't know where to begin your training. You need a pathway to take you from data analyst to data wrangler, into data ops, then data scientist.

The key to successful learning is that the content covers the skills you need in the right order. All of the content should be working together to achieve the role-based learning objective—preparedness for your next great job.

"The new norm is being able to work in new ways and with a more diverse set of talent.[4]

DON'T LET SOFT SKILLS BE THE HARDEST PART

The hard truth about today's tech roles is that you need soft skills too. While you're pursuing the technical skills for your next role, you have to also focus on your business and leadership skills.

Top tech workers balance their strong subject matter expertise and technical know-how with the ability to get stuff done through teamwork. You need to be a pro with written and verbal communication and understand how to motivate others and spur collaboration.

Many tech and developer professionals know the intricacies of complex programs and understand how to approach challenging problems. Let's face it, they're usually some of the smartest people in the company. But the most successful tech professionals know how to execute the day-to-day requirements of leading a team and working with others outside the function. Do you have what it takes?

As work continues to change, tech professionals need "soft skills" to communicate with others in the company, lead and contribute to diverse teams, and effectively manage and collaborate with the distributed and temporary workforce.

As a data scientist you need soft skills like:

- A growth mind-set
- General business acumen
- Strategic thinking
- Active listening
- Design thinking
- Business process improvement
- Understanding of work in an Agile/Lean environment
- The ability to reach sound conclusions
- Commanding the attention of senior executives

IN THE COMPANY

Top tech professionals are expert communicators. They can translate complex topics into digestible, jargon-less ideas for the sales and marketing folk. They know how to delegate work, manage projects, and lead teams to success.

4 "Do These Things to Stay Competitive in the Job Market. " Emily Moore, January 24, 2019, Fast Company.

ON DIVERSE TEAMS

Workplaces continue to grow more diverse. Tomorrow's world of work will be home to more diversity in terms of gender, culture, religion, ethnicity, and other characteristics we're potentially not aware of yet. You have to be able to work well with people whose backgrounds, identifications, practices, and preferences are different than yours.

WITH 'THE NEW NORMAL' WORKFORCE

Tech people need soft skills to work with the non-traditional workforce like gig, contract, and remote workers who continually make up a larger portion of the workforce. For companies that don't want to bring on more full-time people or can't find the exact skills match they're looking for, gig and contract workers can quickly fill these holes and help organizations get the skills and knowledge they need on the fly

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All of these changes are taking place against the modern business context where mission-focused teams come together and disband quickly. With strong soft skills like communication, empathy, and understanding, you're better prepared to lead cross-functional, diverse, and transient, temporary or distributed teams.

THE BEST ROLE-BASED TRAINING PROVIDES A CLEAR PATH TO MASTERY

You don't have the time, energy, or know-how to create a comprehensive learning program, and your organization is unlikely to build the robust curriculum you need in-house. Your best bet is to seek out self-paced training that is purposely designed to prepare you for the next phase of your career.

The best training solution will not singularly focus on the end state role, but rather emphasize bringing learners up to speed from where you currently are in your career.

Data science is a prime example of this. Too many programs jump into the data science curriculum without providing the essentials you need for the other job roles leading to it.

The right training will show you where to start and accelerate your skill development with methodologies for all learning styles.

"Today, soft skills are having a breakout moment. These enduring, essentially human skills are increasing in value in part because they cannot be replicated by machines.[5]

Check-list for best role-based learning programs:

- Off-the-shelf learning paths for a number of tech and dev roles like data scientist, machine learning architect and AI developer
- Video-based courses
- Real-life practice environments
- Live, virtual bootcamps
- In-depth books
- Mobile-friendly

5 "The Future of Work in Technology." Khalid Kark, Atilla Terzioglu, Bill Briggs, Minu Puranik, Deloitte, June 10, 2019.

SKILLSOFT ASPIRE

Aspire journeys are intentionally designed sequenced paths of instruction for today's top tech roles. With Aspire, learners get a simple path for future careers.

Aspire helps you understand where to start your learning journey, relies on objective measures to assess skills and expertise, and ensures readiness for whatever comes next. Learners get a clear path to mastery of the skills needed for today's in-demand roles.

SEQUENCED INSTRUCTION

Journeys are organized along a path that orients learners to key work functions and daily learning challenges.

BASED ON A PROVEN APPROACH TO LEARNING DESIGN

We provide a diverse set of learning tools including videos, books, audiobooks as well as practice assessments that complement the diverse ways people learn

HANDS ON PRACTICE

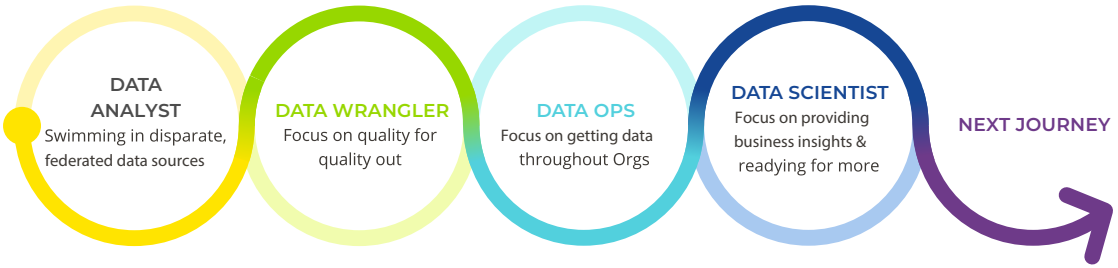
Without the need for any installation, Labs allow learners to prepare in a safe virtual environment and put new capabilities into practice.

JOB READINESS

At the culmination of the journey, users must demonstrate their new-found knowledge by passing a rigorous final exam.

RELEVANT BUSINESS & LEADERSHIP SKILLS

Provided optionally in every Journey, learners can go beyond the technical by learning the relevant skills necessary to communicate ideas to leadership and collaborate across teams



With the Aspire Data Analyst to Data Scientist journey, you'll experience the comprehensive role-based training curriculum for data science, starting with the materials that cover a data analyst's day-to-day role.

- Learn topics like Python, R, architecture and statistics to prepare to the next role.
- Progress to data visualizations, APIs, machine learning and deep learning algorithms.
- Demonstrate your knowledge and applicability of materials covered with assessments.
- Earn your credentials after passing a rigorous final exam and completing a capstone project.

When looking to progress your career, one of the challenges is often as simple as knowing where to start and how to move forward. Aspire journeys are your personalized career pathway, with four tracks that align with your professional goals. Each track delivers just-in-time resources to learn, practice, and master the technical and soft skills that will help advance your career in tech.

As you progress, you'll demonstrate your ability to perform new job functions through assessments, Live Bootcamps and practice lab environments. Along the way, track your achievements, share milestones and ultimately validate your knowledge through a capstone project.

Technology professionals always need to be learning but are often tasked with the most challenging and time consuming work of the company. You need a training solution that removes the question of where to start and gives you a sequenced path of instruction. Improve your efficacy in your current role with new skills and knowledge and be prepared for whatever is next. Aspire journeys allow you to learn efficiently at your own pace, and in a way that benefits your personal growth and marketability.

CONTRIBUTING AUTHOR

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Jim Zimmermann is the Director of Skillsoft's Technology & Developer Solution Practice. He works with Skillsoft's largest customers to help them provide optimized technology & developer training solutions.

During his 40+ years in the IT and media industries, Jim worked for the largest IT and telecom firms as well as SMBs/ startups. Jim started his career at an environmental engineering firm where he taught APL programming to colleagues. Jim later held positions in product management, product and corporate marketing, and technical consulting. He wrote the first commercially available email system for the IBM PC. Jim founded three successful IT/media companies, including the first company to offer advanced image processing on off-the-shelf UNIX workstations.

Jim is a prolific and well-known writer, speaker, and industry analyst. Jim is a columnist for TrainingIndustry.com where he writes about technology and developer training. Jim is a member of the IEEE Computer Society, IEEE Society on Social Implications of Technology, American Association for the Advancement of Science, and The Union of Concerned Scientists.

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