

Mapping aWorkforcein MotionThe Lightcast Approach
to Taxonomies

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INTRODUCTION

Imagine a puzzle where the pieces are constantly changing shape. You're trying to put them together, but the boundaries are fuzzy, and it's difficult to make connections in a way that makes sense.

That's the challenge facing our current global labor market—a complex landscape of skills, occupations, and human potential that is constantly changing. Many workers hold jobs that are entirely new over the past few years. Technological disruption, global economic shifts, and rapid innovation are redrawing the boundaries of work faster and faster. Artificial intelligence, automation, and emerging technologies are not just changing how we work, but fundamentally reimagining what work means.

We need a way to make sense of all this change, and to place it in context with all that we already know. Traditional approaches to understanding the workforce—like static government classifications, ambiguous job titles, or outdated skill inventories— are snapshots from a world that no longer exists, unable to capture the dynamic nature of modern work.

This is where Lightcast is essential. Our pioneering, best-in-class taxonomies organize the world's occupations and skills in order to make that data accessible and useful. Other systems for understanding the workforce are outdated or out of touch, but we understand the relationships between every occupation and every skill, even when they change, so we can deliver reliable answers—fast. We are not merely cataloging the current state of work; we are creating the definitive map of a workforce in constant motion. Organizations around the globe are using this map to align their workforce, their development, and their strategies to the reality of the international labor market.

Any organization involved in making decisions relating to the labor market, whether in education, the public sector, or enterprise, whether in-country or internationally, needs a universal language that can translate these rapid changes—frameworks for occupations and skills that are as dynamic and adaptable as the workforce itself.

Lightcast has developed this language. Our taxonomies don't just describe the current state of work; they provide a living, breathing understanding of how skills, occupations, and human potential interconnect and evolve. Our taxonomies are the picture on the puzzle box—providing clarity, context, and connection in an environment of constant change., needs a universal language that can translate these rapid changes—frameworks for occupations and skills that are as dynamic and adaptable as the workforce itself.

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The Necessity of Adaptability: Navigating a Turbulent Global Labor Market

The world of work is vast, and the amount of information being generated about it every day is increasing. This presents two possibilities: either we use this data to make better and better decisions about how to develop the global workforce, or we drown in it, so overwhelmed by statistics that we are unable to make out what it's telling us.

In order to make the first possibility a reality, we need systems that can understand the millions of jobs and skills that exist today, but also anticipate how work will reshape itself tomorrow.

This is an ambitious task. The challenges include dramatic shifts concerning who constitutes the workforce, and fundamental transformations regarding how work is executed, particularly as they relate to occupations and skills. This period is characterized not only by significant change, but by an accelerating pace of evolution, necessitating a heightened sense of urgency.

A Convergence of Disruptive Forces Impacting Occupations and Skills

The landscape of work, especially concerning the demand and evolution of occupations and skills, is being reshaped by a multitude of dynamic and interconnected factors:

Accelerating Speed of Change in Skill Requirements

The rate at which new skills become essential, and existing skills become obsolete, is unprecedented. This rapid evolution, driven by technological advancements and shifting industry demands, renders traditional, static skill analyses obsolete, demanding a more agile and responsive approach to labor market intelligence. Since 2021, 33% of skills for the average job in the UK have changed. In the US, that figure is 32%, and the pace of skill change is accelerating: the past three years have been almost as disrupted as the previous five.

Emergence of Novel Occupations and Skill Clusters

The rise of new technologies like artificial intelligence and renewable energy is creating entirely new occupations and skill clusters. These emerging roles often require a blend of technical expertise and soft skills, blurring traditional occupational boundaries.

Globalization of Skill Demand and Occupational Mobility

Organizations are now competing for talent on a global scale: Lightcast research has found that remote work postings have increased by over 250% since 2019 worldwide, and firms are increasingly hiring remote work abroad. (This is especially the case for North American firms hiring in Central America and Western European firms hiring in North Africa). This interconnectedness necessitates a universal framework for understanding skills and occupations across diverse cultural and economic contexts.

Bridging the Gap Between Data and Actionable Insights on Occupations and Skills

Organizations across all sectors face the daunting task of adapting to these profound changes in the nature of occupations and skill requirements. Even solutions that seem useful at first glance face significant challenges:

Occupations vs. Titles

When making sense of a complex collection of information, identifying patterns is the first step: "this is similar to that." When confronting the billions of jobs held by billions of workers, this means the first layer of filtration is grouping similar jobs together under one name–even if the actual job titles might be different: "iOS Programmer," "iPhone Engineer," and "iOS Solutions Architect" are different job titles, but clearly comparable to one another; all of these people are developing software for iOS. Relying on job titles alone would prevent this useful comparison.

Strengths and Weaknesses of Official Statistics

Governments are uniquely capable of measuring statistics about their own economies and workforces, and the datasets available from official outlets often provide a valuable foundation for all other insights. But broadly speaking, these sources have three weaknesses: they lack specificity, they move slowly, and they focus on specific geographies. It takes time for government agencies to publish their findings, often a year or more, and it also takes time for them to recognize emerging trends, and so the number of occupations and skills they recognize and categorize will be fewer than a faster-moving organization can provide. But even the fastest, most detailed official taxonomy would still be focused on that government's own constituents, not the whole world.

Ambiguity and Granularity of Internal Skill Data

While business-specific data can offer valuable insights into an organization's own needs, they can be hindered by an insider-focused approach that is informed more by one company's unique features than by external labor market realities. This lack of standardized terminology makes it difficult to draw meaningful comparisons across organizations or industries.

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THE SOLUTION

Establishing a Universal Language for Understanding Occupations and Skills

To effectively navigate these challenges, organizations require a universal language that can bridge the gap between disparate data sources and provide actionable insights on occupations and skills.

What qualities would we want in this universal language?

Global Applicability for Skill and Occupational Analysis: It must be capable of linking data across national borders, enabling meaningful comparisons and analyses of global skill and occupational trends.

Reliable Clarity in Skill and Occupational Terminology: It must employ standardized terminology and classification systems to eliminate ambiguity and ensure consistent interpretation of skill and occupational data. To use the same example as above, the universal language could classify "iOS Programmer," "iPhone Engineer," and "iOS Solutions Architect" all under the term "iOS Developer / Engineer." This has an advantage beyond standardization: the shared name also describes the work the person accomplishes, further increasing clarity. **Useful Granularity** in Skill and Occupational Definitions: It must provide sufficient granularity to enable the identification of nuanced differences in skills and occupational requirements, allowing for precise targeting and analysis, without slicing the data too thinly that the categories cease to add clarity.

Responsive Dynamism to Skill and Occupational Change: It must be sufficiently dynamic to keep pace with the rapid evolution of skill and occupational requirements, incorporating emerging skills and occupations as they appear. The trick here is to provide insights as quickly as possible while still maintaining a high standard of usability, which may require a short period of refining the data to maximize its effectiveness.

Lightcast's proprietary taxonomies for occupations and skills collectively provide this essential universal language. By offering a comprehensive, dynamic, and globally applicable framework, Lightcast empowers organizations to navigate the complexities of the modern labor market and make informed, strategic decisions regarding occupations and skills.

In this constantly-evolving landscape, the need for a universally recognized and reliable standard for defining and analyzing skills and occupations has become paramount.

Lightcast: The Definitive Standard

Lightcast taxonomies are built on the world's best database of labor market information. We pioneered the collection, big-data analysis, and proprietary combination of job postings, career profiles, and government statistics, and our models and taxonomies provide the structure that allows for understanding that data easily and efficiently. Our proprietary database is comprised of those three core pillars, and combined, they provide an unparalleled level of clarity and insight into the intricate dynamics of the modern labor market. These sophisticated taxonomies, powered by machine learning and refined by human experts, set Lightcast apart.

The Foundation of Comprehensive Data: Three Core Pillars

By combining these diverse and complementary datasets on region, demand, and supply, we can construct a comprehensive and multi-dimensional view of the labor market, transcending the limitations of analyses that rely on single-source data.

1. Official Government Statistics	 In many countries, government statistics provide the essential demographic and economic context that serve as the bedrock for any meaningful labor market analysis. In the regions for which they offer a reliable and established baseline, these statistics allow us to understand the broader trends and patterns that shape the workforce. This includes data on employment rates, industry distributions, and historic economic shifts down to specific regional levels (e.g., Census tract, ZIP code, or local administrative region). Over time, we have enhanced this data with an unsuppression model that reveals information beyond the published data for specific markets, and we use our knowledge of the labor market to project changes. 		
The Bedrock of Foundational Context			
2. Proprietary Online Job Postings Data	 Real-time data is indispensable. Our proprietary data on online job postings provides a real-time view of emerging skills, evolving job roles, and the immediate demands of employers. 		
Capturing the Real-Time Pulse of the Market	 This data allows us to identify the skills that are currently in demand, the types of jobs that are being created, and the shifting requirements of industries. This data is available to users immediately after it has been refined and confirmed by our machine learning tools and in-house experts, which ensures connections between data points are both responsive and reliable. 		
3. Professional Profile Data	 This data captures the actual experiences of individuals, offering invaluable insights into how skills are being used in real-world contexts and the trajectories of career development. 		
Reflecting the Lived Experience of Available Talent	 This data helps to see the actual skills that people are using in their jobs, and helps to validate the information that is gathered from the job postings. 		

Together, these pillars provide an advantage greater than the sum of their parts. The Lightcast Workforce **Estimation Model**, for example, draws on all three datasets in order to create a granular estimate of the total size of a workforce for a given region and occupation.

This is where the Lightcast Occupation Taxonomy and Skills Taxonomy play a critical role: they allow us to bridge the gap between different datasets, making them all speak the same language. This, in turn, also helps us build models to extract labor market insights we could not extract by using each type of source in isolation, and allows companies, governments, institutions to connect to the language of the labor market and the insights therein.

The Power of Taxonomies: Transforming Raw Data into Actionable and Meaningful Insights

A taxonomy is a systematic method of classification and organization that establishes hierarchical relationships between different concepts, categories, or entities. It provides a structured framework for categorizing complex information, establishing clear relationships between different elements, creating a common language for understanding and communication.

So in a labor market context, the value is straightforward: clear classification means clear comparison, so that trends and insights are easily understood. The Lightcast Occupation Taxonomy and the Lightcast Skills Taxonomy provide the essential structure and language necessary to translate raw, unorganized data into actionable and meaningful insights.

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The Lightcast Occupation Taxonomy (LOT): Mapping a Changing Labor Market

LOT'S FOUR LEVELS OF GRANULARITY

Career Areas



(e.g. Healthcare, Finance, Transportation) are the broadest occupational category in the Lightcast Occupation Taxonomy. They are designed to be useful in bringing together many similar occupations that are responsible for similar work tasks. Their overarching scope allows for a quick look at broad segments of the labor market.

Occupation Groups



(e.g. Physicians, Banking and Lending, Truck and Bus Drivers) are clusters of occupations that share very similar skill or role requirements. They describe the different "fields" or "disciplines" available in the market for early- or pre-career students.

Occupations



(e.g. Physician, Loan Officer, Tractor-Trailer Truck Driver) often overlap with actual job titles. They are designed to align easily with government taxonomies, undergraduate degree programs, and the career aspirations of workers entering a new industry for the first time.

Specialized Occupations



(e.g. Surgeon, Mortgage Underwriter, Refrigerated Truck Driver) offer our most granular level of specificity, allowing for the closest look at supply and demand for a given role compared to the market, and also the clearest look at the skills required. They are characterized by unique and value-added sets of skills, roles, and responsibilities, as well as additional education or credentials beyond the minimum requirements of the entry-level role they may extend from.

The standard for understanding occupations across the globe

1800+ specialized occupations, organized hierarchically in 800+ occupations, 180+ occupation groups and 28 career areas.



LOT Highlights

Each concept has a name, description and information on training requirements Together with Lightcast skills and job titles, it is the building block to a common language in the labor market The hierarchical structure helps identify the link between occupations, zooming in and out as needed Each layer is matched to the others, without overlap or omissions. For instance, every Occupation appears in only one Occupation Group, which appears in only one Career Area

How Do We Know Which Job Matches Which Occupation?

The Lightcast Occupations Taxonomy (LOT) Classifier is our tool that predicts the Specialized Occupation advertised in a job posting, and uses curated machine learning model approach.

The classifier uses a job posting's title, description and regional information (i.e. origin country and language) in order to classify the content to one of Lightcast's Specialized Occupations. Taxonomists curate parts of the model to target the specific keywords, skills, and terminology of our Specialized Occupations. The remaining portion of the model learns from a corpus of raw job postings data. This ensures that our occupation classifier is picking up on all the skills, relevant certifications, representative roles and responsibilities, and other industry or occupation specific terminology in order to classify the posting correctly. Common words, company boilerplates, and benefits are removed prior to classification.

Once classified to a specialized occupation within LOT, the posting is automatically associated with the relevant Occupation, Occupation Group, and Career Area, because each layer connects directly to the others—every Specialized Occupation falls under exactly one Occupation, and every Occupation Group falls under exactly one Career Area.

Adaptation and Reliability: The Update Process

Lightcast has been delivering actionable insights to the world's biggest organizations for decades, and the LOT is already widely used across the world of work: it powers decision-making by 67 of the Fortune 100, over 775 workforce and development organizations, and over 1,000 education institutions. But while our taxonomies have stood the test of time as a definitive authority in this space, we need to stay a step ahead of a disruptive market to deliver a clear advantage for customers. Our taxonomies are refreshed monthly to ensure their alignment in the fast-moving world of work.

The current edition of LOT reflects this adaptation and eye toward the future. Artificial Intelligence, for instance, represents the most significant workforce transformation of our era, and our latest taxonomy update reflects this seismic shift. Where previous versions have included AI as a peripheral skill, the LOT now recognizes AI and machine learning as fundamental workforce categories. Other changes reflect developments in other fields, including the new occupation "Drone Pilot" within the occupation group of "Media Production Technicians.

On the other hand, this update keeps 92% of occupation concepts and 89% of specialized occupations unchanged, so it provides a consistent framework that organizations can trust. By maintaining 90% of our existing taxonomy while carefully incorporating critical new insights, we offer a living document that reflects the real-world complexity of work. Organizations can build long-term strategies with confidence, knowing our taxonomy provides both stability and responsiveness.

Competitive Landscape: Lightcast's Taxonomic Differentiation

Not all taxonomies are created equal. The Lightcast approach, with its emphasis on innovation, granularity, global reach, and real-time responsiveness, stands alone. By comparing existing classification systems, we can see Lightcast provides multifaceted capabilities that deliver an advantage to customers, more than existing classification systems can provide.

Unparalleled Advantages: Lightcast as a Clear Market Leader

Lightcast's occupational taxonomy stands apart due to its unique combination of:

Global Reach

Comprehensive international coverage on every continent except Antarctica, providing a truly international perspective on the labor market.

Granular Detail

Over 1,800 specialized occupations, offering 2-4 times the granularity of government taxonomies. Private competitors largely use those government taxonomies, suffering the same weaknesses, or simply input job titles, which are noisy and unreliable—when using only job titles, one might miss that a Proofreader and a Copy Editor do the same kind of work, or that a Project Manager in construction and a Project Manager in marketing do not.

Real-Time Responsiveness

Regular, agile updates, ensuring the taxonomy remains current with the evolving labor market, a stark contrast to the often decade-long update cycles of official taxonomies.

Government Taxonomies

So how does the LOT compare to alternatives? Government-sponsored taxonomies are valuable starting points. Their rigorous checking and deep histories make them good options for long-term comparison or a high-level overview—but for most use cases faced by enterprise, education, and the public sector, these data sources lack the speed or specificity to provide the data that organizations need, when they need it.



US Standard Occupational Classification (SOC):

- US-Centric: While a foundational resource, SOC has limited global applicability.
- Last Updated 2018: Long period since a comprehensive update means SOC fails to capture the evolution of existing roles and emergence of new ones.
- 860 Occupational Categories: Half as granular as LOT.

International Standard Classification of Occupations (ISCO):

- EU-Focused: Primarily used at a continent level; many individual European countries use their own national systems for local analysis.
- Last Updated 2008: Significant gaps in understanding of current labor market.
- 400 Occupational Categories: Lacks the specificity needed to capture the modern labor market.

Comparative Analysis: How Lightcast is Unique

In a labor market characterized by rapid change and global interconnectedness, Lightcast's occupational taxonomy emerges as the standard, universally accepted and used. Its unique combination of global reach, granular detail, real-time responsiveness, and mass adoption positions it as an indispensable tool for organizations seeking to navigate the complexities of the modern workforce.

	Lightcast Occupation Taxonomy (LOT)	The Competition
DETAIL	Offers 1,800+ specialized occupations	× Broader categories limits granularity and obscures details
SOURCES	Built on an integrated database of job postings, profiles, and government statistics	× Rely on external, less comprehensive classifications and sources
COVERAGE	Comprehensive global coverage for an international labor market	X Limited to specific regional contexts
UPDATES	Updated regularly to reflect evolving and emerging trends	X Infrequent updates fail to capture current market dynamics
STRUCTURE	Hierarchical structure for flexible layers of analysis	× Relationships between occupations not defined
MODELS	Uses machine learning and human expert curation to classify job postings to the correct occupations	X Uses less effective methods, or only machine learning to classify job postings
INTEGRATION	Provides easy crosswalks between national classification systems	× Difficult to compare data across different regions
SCOPE	Reflects the entirety of the labor market	× Taxonomies specific to regions or companies are difficult to align with others
SKILLS	Integrated with the Lightcast Skills taxonomy, showing a complete picture	× Disconnect between occupations and skills limits effectiveness of both



The Lightcast Skills: Establishing a Standardized Language for Workforce Capabilities

For skills to be useful, everyone needs to understand what everyone else is saying. Nobody can fully understand a job without understanding the skills it requires—meaning a skills-based approach is crucial for everyone at every level of the labor market.

Everyone involved in the labor market, can put skills to use. **Educators** need a language that will show value to prospective students and employers, and individual workers need employer-friendly language that will communicate their value to businesses. At the same time, **businesses** need to know how to clearly express what they're looking for, so they don't miss out on hiring valuable talent, and **regions** need to understand how they compare to other communities and how to stay competitive. Skills enable all of this. The Lightcast Skills Taxonomy delivers clarity by allowing everyone to speak the same language. With a shared vocabulary, we can enable every worker and every job to precisely identify and articulate the supply and demand they offer the labor market. This extensive library catalogs over 33,000 skills and is updated monthly, providing a standardized and universally understood language for describing and analyzing workforce capabilities.

With tens of thousands of skills to classify, and billions of job postings to sort through, the first step is using machine learning and natural language processing to classify the language used in job postings into the standardized vocabulary of Lightcast Skills. But that's not the end of the process: what sets Lightcast apart is how human experts check and refine every skill in order to maintain the highest standard of accuracy and usefulness. This attention to detail, combined with the decades of experience Lightcast has in collecting and analyzing labor market data, make Lightcast the global leader in skills: over 6,000 organizations have already adopted Lightcast Skills as their standard for the international labor market.

Similar to how the LOT uses four layers of classification, Lightcast Skills Taxonomy uses three layers of categories to help navigate the taxonomy. For example, within the category of "Engineering" is the sub-category of "Aerospace Engineering," and within that, one can see several related skills, from "Aircraft Design" to "Space Flight." These skills are extracted from job postings by taking into consideration the context in which words are used and are regularly updated to keep up with employers' requirements.

They are organized hierarchically in 400 subcategories and 32 categories and can broadly be split into three categories:

1. Common skills, or soft skills, are foundational abilities required across many sectors.

2. Specialized skills refer to the technical expertise typically needed in specific industries or occupations.

3. Software skills involve knowledge of particular software and programming tools.

Skills taxonomy competitor analysis

	Lightcast Skills Taxonomy	The Competition
SIZE	✓ 33,000+ skills sourced from real-time job postings, global profiles, and government data across 43 countries	X Often limited to static or self-reported data sources; lacks real-world validation and labor market breadth
STRUCTURE	Three-layered taxonomy includes categories, subcategories, and individual skills with metadata like type, growth trajectory, and classification	✗ Many rely on flat lists or broad groupings, limiting analytical depth and usability across use cases
UPDATES	Updated monthly to reflect emerging skills, industry changes, and market trends	★ Update cycles are irregular, opaque, or delayed— some based on taxonomies last updated in 2018 or earlier
DEFINITIONS	Each skill has a definition with transparent context, tags (e.g., software, language), and clear real-world application	✗ Skill definitions are missing, outdated, or ambiguous−limiting user understanding and classification quality
INSIGHTS	Skill modeling and growth trends based on demand signals, supply trends, and salary correlation, including unique models like Build/Buy/Borrow and Salary Boosting	✗ Limited or no modeling to assess trends, adjacencies, or business impact of skills
QUALITY	Validated by economists and labor market analysts—not just machine-learned, but refined by human experts	★ Often "black-box" AI models with little transparency, no human refinement, and no explainability
TRANSPARENCY	Public changelog and Open Access —free taxonomy available via API (non-commercial use) and updated with full documentation	✗ Proprietary, closed systems with no changelog, limited transparency, and unclear licensing or pricing
BENCHMARKS	Crosswalked to ONET, SOC, ISCO, and used to power industry benchmarks and global standards like Stanford's Al Index and WEF's Future of Jobs	✗ No crosswalks, no adoption by global institutions, or reliant on outdated taxonomies for classification
USES	Supports dynamic labor market use cases including job/skill matching, workforce transition analysis, and curriculum development	✗ Primarily built for static classification or job board tagging, not suited for dynamic use in talent or education
INTEGRATION	✓ Integrated with leading HCM platforms—Lightcast is The only skills partner embedded across SAP, Oracle, Workday, and UKG—200+ tech partners and 5,000+ orgs lead with Lightcast	✗ Few have meaningful integrations across the HCM ecosystem, limiting applicability in enterprise HR workflows

Practical Applications: Transforming Workforce Intelligence into Strategic Action

HOW TO ACCESS THE LIGHTCAST SKILLS AND OCCUPATION TAXONOMIES

You can explore the full Lightcast Occupation Taxonomy and toggle through the four layers of classification here, and the Skills taxonomy and its three layers of classification here. But these taxonomies don't exist for their own sake: they exist in order to provide useful insights for the enterprise, education, and public sector organizations using Lightcast data, and they power our insights across all our platforms.

Data Sharing

We provide unparalleled access to the world's most comprehensive labor datasets. Our flexible data sharing solutions—including APIs, cloud integrations, and custom data platforms—enable organizations to transform raw information into strategic insights. Whether you need granular job market data or broad workforce trends, our taxonomies ensure you can extract precisely the information you need.

Software Solutions

Lightcast software tools, including <u>Analyst</u>, transform complex labor market data into intuitive, interactive experiences. Researchers can explore dynamic maps and graphs, share insights across teams, and compress extensive data analysis into just a few clicks. Our software turns sophisticated taxonomies into user-friendly tools that make workforce intelligence accessible to everyone. We also have purpose-built solutions, including <u>Talent Transform</u> and <u>Skillabi</u>, that enable you to map your internal workforce or development strategies to real-world supply and demand, so you can make decisions based on an accurate understanding of the global labor market.

Professional Services

Our team of expert consultants and data scientists goes beyond data provision. We apply Lightcast's advanced labor market intelligence to your most critical questions, uncovering measurable strategies with clear growth roadmaps. Through custom analysis and strategic consulting, we help organizations translate taxonomic insights into actionable workforce solutions.

Public Sector Applications

FOSTERING ECONOMIC DEVELOPMENT AND STRATEGIC WORKFORCE PLANNING

Detailed Sector Mapping for Regional and National Development

- LOT enables public sector entities to conduct in-depth analyses of specific sectors crucial to regional economic development. For example, when a region seeks to cultivate a thriving maritime tourism industry, LOT facilitates the complex mapping to build the workforce for all requisite roles, from harbor management and nautical operations to hospitality and tourism marketing. This detailed mapping extends to the identification of precise skill requirements for each role, enabling policymakers to implement targeted training programs and infrastructure investments.
- Because LOT provides a crosswalk between national classification systems, it allows for easy international comparison: to use our maritime tourism example, Barcelona can compare itself to Marseilles as easily as San Francisco can to Seattle.

Helping Workers Rebound through Reskilling

If layoffs, shutdown, or another disruption affects one of a region's main employers, workforce development leaders
might suddenly find many of their constituents need to find new jobs quickly. Lightcast skills tools, powered by
the Lightcast Occupation Taxonomy, makes this possible: by understanding what skills workers already have, it's
possible to identify what jobs they could move into. Without Lightcast, and the ability to see how skills are related to
one another, the search for next steps would lack valuable potential connections.

Case Study: CyberSeek

To help close the cybersecurity skills gap, **CyberSeek** uses Lightcast data to provide detailed, actionable data about supply and demand in the cybersecurity job market. By providing interactive visualizations and analyses of the cybersecurity labor market, CyberSeek empowers policymakers, educators, and employers to understand the supply and demand for cybersecurity professionals, facilitating targeted interventions to close the talent gap. This approach, specifically aimed to find workers for specific occupations, uses LOT to identify which jobs are cybersecurity jobs.



Education Applications

ENABLING LEARNERS TO BUILD SUCCESSFUL CAREERS

Aligning Academic Programs with Industry Demand

• Higher education institutions can use the Skills Taxonomy to create dynamic, market-responsive curriculum design. By analyzing the precise skill requirements across industries, universities can develop programs that directly address workforce needs. For instance, a computer science department might identify emerging skills in quantum computing, AI ethics, and cloud security, then design specialized modules or certificates that give students a competitive edge. This skills-based approach transforms academic planning from a reactive process to a strategic, forward-looking initiative.

This is also applicable as an employee training and development opportunity: the talent development company Guild connects employees to education programs, and uses Lightcast Skills to identify which capabilities would be most valuable for workers to learn, and also to understand which skills employees have acquired through their programs.

Data-Driven Identification of In-Demand Local Occupations

• In a very similar way, LOT empowers educational institutions to remain responsive to the dynamic needs of local labor markets. By identifying the specific occupations currently in high demand nearby, institutions can tailor their academic programs to ensure graduates are ready to enter the workforce in jobs sought by employers.

Comprehensive Career Pathway Development

 Career services offices can use LOT to facilitate comprehensive career pathways for students, going beyond the first step after graduation and providing clear insights into potential career trajectories, requisite skills, and prevailing salary ranges. This empowers students to make informed educational and career decisions.

Case Study: Guild

Just like colleges and universities can use occupation and skills data to design programs that help students prepare for long-term career success, internal training and development teams can as well. For example, the talent development company Guild connects employees to education programs, and uses Lightcast Skills to identify which capabilities would be most valuable for workers to learn, and also to understand which skills employees have acquired through their programs. Guild uses Lightcast Skills to identify which courses would be most effective for employees to take, and then also tracks them so organizations have an accurate account of what skills their workforce has learned.

Guild

Enterprise Applications

OPTIMIZING WORKFORCE STRATEGIES AND GLOBAL TALENT ACQUISITION

Standardizing Global Talent

• LOT provides a standardized framework for developing robust job architectures across different geographies. Pernod Ricard, the multinational spirits company, uses Lightcast to ensure its nearly 20,000 employees in over 60 countries are working as a cohesive team. The Skills Taxonomy provides a universal language for talent management that transcends geographical and linguistic barriers.

Competitive Talent Market Analysis

• The Lightcast Occuptaion Taxonomy provides talent management professionals with an unprecedented competitive advantage in workforce intelligence. By mapping skills across industries, organizations can conduct granular analyses of talent markets that go far beyond traditional benchmarking. This approach allows companies to understand not just salary ranges, but the precise skill ecosystems driving competitor performance—and by knowing very precisely which skills are most important to the organization, recruitment can be very deliberate in their approach, optimizing for exactly the abilities the company needs.

Identifying Internal Talent Potential

• Lightcast enables organizations to uncover hidden workforce capabilities by providing a granular understanding of employee skill inventories. Instead of relying on job titles or traditional career progression, companies can map transferable skills across departments, creating more flexible talent deployment strategies. This approach transforms traditional human resources from an administrative function to a strategic talent optimization platform.

Case Study: Pernod Ricard

LOT provides a standardized framework for developing robust job architectures across different geographies. Pernod Ricard, the France-based multinational spirits company, uses Lightcast to ensure its nearly 20,000 employees working in over 60 countries are working as a cohesive team. The Skills Taxonomy provides a universal language for talent management that transcends geographical and linguistic barriers, making Lightcast's workforce data and LOT a must for any business operating internationally.



Pushing the Frontier: World-Changing Research Using Lightcast Taxonomies



The Stanford Al Index Report

Every year, the Stanford Institute for Human-Centered AI releases its annual <u>AI Index Report</u>, showing how the field continues to develop at a rapid pace. Lightcast contributes to this important research each year with a detailed analysis of which AI skills are being requested for which jobs around the world, tracking their widespread adoption. Precisely identifying which skills are AI-related is the first step in this analysis, which is why the Stanford research relies on the Lightcast Occupation Taxonomy. Not only can Lightcast identify when a job posting requests an AI skill, we can also map the diverse vocabulary used in postings to the standardized vocabulary of the taxonomy, allowing for clear tracking of AI skills over time.



Enabling Transitions to the Jobs of Tomorrow: Lightcast and the World Economic Forum

Job transitions increase efficiency, reduce unemployment, and enable workers to earn higher salaries. The Lightcast Occupation Taxonomy can be used to identify how similar jobs are to one another, so that workers around the world can more easily make advantageous changes—and as the global labor market undergoes profound transformation, facilitating those transitions is essential. **The World Economic Forum and Lightcast partnered to** identify transitions that are actually happening all over the world and strategies that can promote more of those changes in the future. Our report ("Unlocking Opportunity: A Global Framework for Enabling Transitions to the Jobs of Tomorrow") provides a regional analysis that uses Lightcast data to identify some of the most common, and most beneficial, job transitions that occur throughout the world. Each of those regional highlights include case studies that demonstrate what successful job-transition initiatives can look like.

Conclusion

At Lightcast, we're proud of having the world's most robust collection of data on occupations and skills, but that data is only useful if it's accessible through taxonomies that actually keep pace with today's lightning-fast job market. While others rely on outdated classifications from 2008 or 2018, our living, breathing taxonomies capture emerging roles in real-time across 43 countries, giving forward-thinking organizations the competitive edge they need to thrive in a talent landscape that won't wait for slow movers.

Our proprietary system doesn't just organize information – it transforms disconnected data points into a universal language that bridges borders, connects industries, and reveals hidden talent patterns your competitors can't see. In a world where emerging technologies like AI are reshaping entire career fields overnight, Lightcast taxonomies provide the clarity and precision needed to make confident workforce decisions today while strategically preparing for the opportunities of tomorrow.

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