



Protecting the Future: The Fastest-Growing Cybersecurity Skills

October 2020

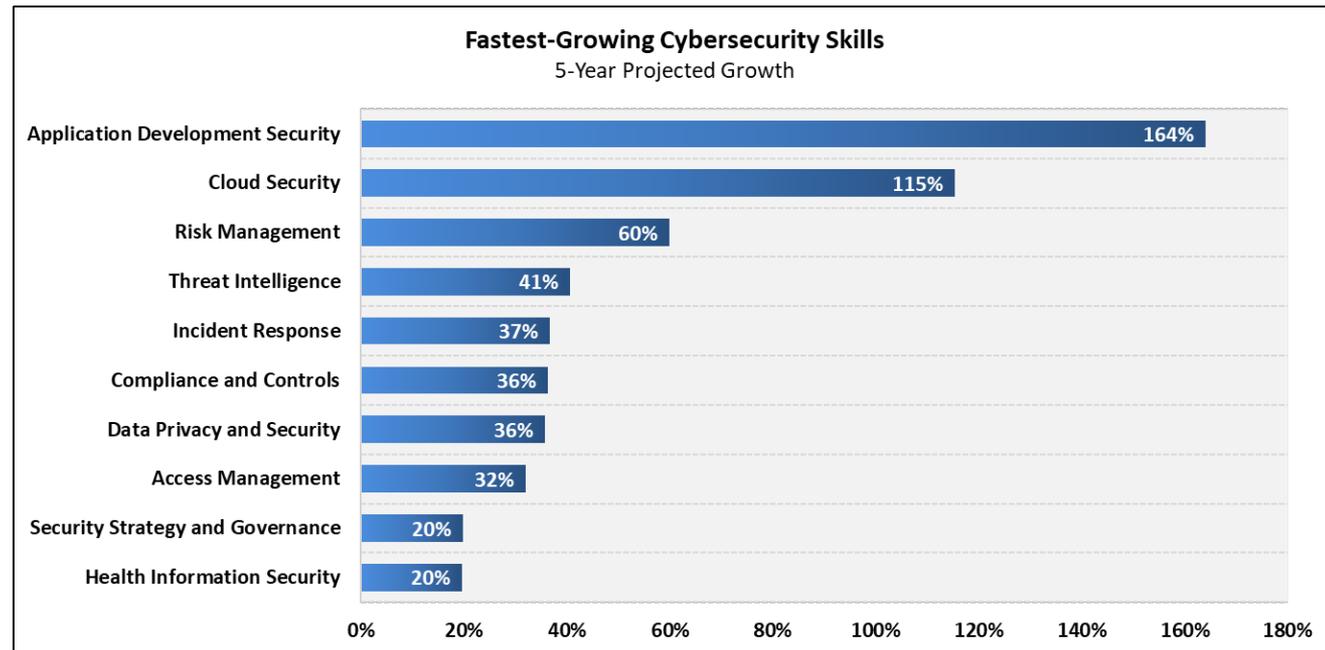
THE FUTURE IS DIGITAL...AND SCARY

Every day, more of our lives move online. Whether it's our appliances, our vehicles, or our election systems, we increasingly blur our digital and physical realities. This can bring dramatic increases in productivity and efficiency, but it also introduces dramatic new risks. Cybercriminals can turn any digital tool into a digital weapon, and there is no shortage of evidence that our digital information is under siege. This means we need well-trained cybersecurity professionals with the skills necessary to protect us against an ever-evolving set of cyber threats.

NEW THREATS REQUIRE NEW SKILLS

As cybercriminals constantly reinvent both themselves and the tools used to attack our digital infrastructure, cybersecurity workers must also reinvent their skillsets to keep pace.

But this is easier said than done: It requires workers and their employers to anticipate and prepare today for the skill needs of tomorrow.



To help organizations, training providers, and individuals pinpoint the skills needed to prepare for the future of cybersecurity, Burning Glass analyzed its database of over 1 billion historical job records and projected the five-year growth rates for skills across the cybersecurity landscape.¹ The following report shows the cybersecurity skill areas with the highest projected growth and can be used to inform targeted skill development for individuals and teams concerned with protecting the future of our digital world.

¹ Burning Glass has made previous findings from this research available in [a series of reports](#), and publishes cybersecurity insights in real-time on the website [Cyberseek.org](#)

The fastest-growing skill areas are associated with building secure digital infrastructure from the ground up. Application Development Security and Cloud Security are far and away the fastest-growing skill areas in cybersecurity, with projected 5-year growth of 164% and 115%, respectively. This underscores the shift from retroactive security strategies to proactive security strategies.

High-growth skills come with high salaries. The fastest-growing cybersecurity skill areas come with significant salary premiums for workers proficient in these skills. On average, these skills come with salary premiums of up to \$15,000 or higher. This means workers have a strong financial incentive to build these skills, while employers have a strong incentive to train existing workers in these emerging skillsets.

Fast-growing cybersecurity skills are not just for IT professionals. While many of the fastest-growing cybersecurity skills are technical in nature, some are in high-demand outside of traditional cybersecurity or IT roles. One of the largest roles requiring Data Privacy and Security skills, for example, is Attorney, and most of the top jobs requesting health information security skills range from cybersecurity engineers to health care administrators and even insurance sales agents. This creates hybrid roles that must blend cybersecurity skills within their existing responsibilities.

Each fast-growing skill area has specialty skills growing even faster. Within each skill area, there are sub-specialties that are projected to grow even faster than the skill area overall. DevSecOps, for example, is within the broader Application Development Security skill area and is projected to grow faster than any other sub-specialty, at 174% over the next five years. Every skill area has at least one sub-specialty projected to grow 50% or more over the next five years, demonstrating the rapid evolution in all corners of the cybersecurity landscape.

Top 10 Fastest-Growing Cybersecurity Skills for 2021

Skill Drill Down: Application Development Security



Total Openings

29,635

Average Salary Premium

\$12,266

+164%

Projected 5-Year Growth

Key Specialized Occupations

1. **Software Developer**
2. **Cybersecurity Engineer**
3. **Systems Engineer**
4. **DevOps Engineer**
5. **Network Architect**

Fastest-Growing Skills

1. **DevSecOps (+174%)**
2. **Container Security (+155%)**
3. **Microservices Security (+113%)**
4. **Application Security Code Review (+43%)**

Skill Drill Down: Cloud Security

Total Openings

19,477

Average Salary Premium

\$15,025

+115%

Projected 5-Year Growth

Key Specialized Occupations

1. **Cloud Architect**
2. **Systems Engineer**
3. **Software Developer**
4. **Cybersecurity Engineer**
5. **Cybersecurity Consultant**

Fastest-Growing Skills

1. **Azure Security (+164%)**
2. **Cloud Security Infrastructure (+144%)**
3. **Google Cloud Security (+135%)**
4. **Public Cloud Security (+121%)**
5. **Cloud Security Architecture (+103%)**

Skill Drill Down: Risk Management

Total Openings

57,967

Average Salary Premium

\$13,379

+60%

Projected 5-Year Growth

Key Specialized Occupations

1. **Cybersecurity Engineer**
2. **Cybersecurity Analyst**
3. **Cybersecurity Manager**
4. **System Engineer**
5. **Network Architect**

Fastest-Growing Skills

1. **SABSA (+65%)**
2. **FedRAMP (+63%)**
3. **NIST Cyber Security Framework (+62%)**
4. **Cybersecurity Assessment (+52%)**

Skill Drill Down: Threat Intelligence

Total Openings

60,039

Average Salary Premium

\$9,609

+41%

Projected 5-Year Growth

Key Specialized Occupations

1. **Cybersecurity Engineer**
2. **Cybersecurity Analyst**
3. **Security Intelligence Analyst**
4. **Vulnerability Analyst**
5. **Software Developer**

Fastest-Growing Skills

1. **Threat Hunting (+105%)**
2. **Security Insider Threat Mgmt. (+56%)**
3. **Threat Modelling (+51%)**
4. **Threat Intelligence and Analysis (+46%)**
5. **Threat Analysis (+24%)**

Skill Drill Down: Incident Response

Total Openings

23,497

Average Salary Premium

\$5,683

+37%

Projected 5-Year Growth

Key Specialized Occupations

1. **Cybersecurity Engineer**
2. **Cybersecurity Analyst**
3. **Data Scientist**
4. **Vulnerability Analyst**
5. **Software Developer**

Fastest-Growing Skills

1. **Anomaly Detection (+58%)**
2. **Phishing (+36%)**
3. **Social Engineering (+21%)**
4. **Security Information and Event Management (+17%)**

Skill Drill Down: Compliance and Controls

Total Openings

54,770

Average Salary Premium

\$12,423

+36%

Projected 5-Year Growth

Key Specialized Occupations

1. Cybersecurity Engineer
2. Cybersecurity Analyst
3. Cybersecurity Manager
4. Security Officer
5. Cybersecurity Consultant

Fastest-Growing Skills

1. GDPR Assessment, Strategy & Remediation (+98%)
2. NIST Security Standards (+43%)
3. ICS Security Standards - NIST 800-82 (+37%)
4. ISO 27001 (+32%)
5. NIST SP 800-53 (+23%)

Skill Drill Down: Data Privacy and Security

Total Openings

88,527

Average Salary Premium

\$5,256

+36%

Projected 5-Year Growth

Key Specialized Occupations

1. Attorney
2. Cybersecurity Analyst
3. Network Architect
4. Software Developer
5. Cybersecurity Engineer

Fastest-Growing Skills

1. Data Privacy (+59%)
2. Data Security (+20%)

Skill Drill Down: Access Management

Total Openings

118,096

Average Salary Premium

\$6,451

+32%

Projected 5-Year Growth

Key Specialized Occupations

1. **Software Developer**
2. **Cybersecurity Engineer**
3. **Systems Engineer**
4. **Network Architect**
5. **Java Developer**

Fastest-Growing Skills

1. **Multi Factor Authentication (+62%)**
2. **OAuth (+61%)**
3. **Spring Security (+44%)**
4. **Role Bases Access Control - RBAC (+27%)**
5. **Password Management (+23%)**

Skill Drill Down: Security Strategy and Governance



Total Openings

82,952

Average Salary Premium

\$7,735

+20%

Projected 5-Year Growth

Key Specialized Occupations

1. Cybersecurity Engineer
2. Cybersecurity Analyst
3. Security Officer
4. Cybersecurity Manager
5. Cybersecurity Consultant

Fastest-Growing Skills

1. Cybersecurity Strategy (+57%)
2. Information Governance (+50%)
3. Security Operations Mgmt. (+24%)
4. Security Design (+16%)
5. Security Implementation (+15%)

Skill Drill Down: Health Information Security

Total Openings

413,687

Average Salary Premium

\$738

+20%

Projected 5-Year Growth

Key Specialized Occupations

1. Health Insurance Sales Agent
2. Medical Assistant
3. Medical Records Technician
4. Health Care Administrator
5. Cybersecurity Engineer

Fastest-Growing Skills

1. Health Care Security (+51%)
2. Electronic Case Report Form (ECRF Design (+24%))
3. Health Information Confidentiality (+23%)
4. HIPAA Compliance (+22%)
5. HIPAA Regulations (+23%)

A vertical timeline diagram consisting of four blue-outlined circles connected by a thin grey vertical line. The circles are positioned to the left of the text blocks, marking the four steps of the methodology.

First, Burning Glass mined its database of over 1 billion historical job records and over 17,000 unique skills to identify all skills related to the cybersecurity landscape.

Next, Burning Glass assessed the projected growth of each of these skills by leveraging its proprietary projections of workforce demand growth for individual skills. These projections are informed by historical demand growth in online job postings, growth in prevalence among professional discussion groups, and growth in related web-based data sources. Burning Glass's skill projection model is over 90% accurate when compared with historical growth data.

Burning Glass grouped all individual specialty skills with projected 5-year growth rates of 15% or higher into related skill areas. For example, Cloud Security Architecture and Public Cloud Security were both grouped into the "Cloud Security" skill area. Vendor-specific skills were removed from the analysis.

Finally, Burning Glass compared the weighted average of the projected growth rates for these skill areas to identify the fastest-growing skill areas across the cybersecurity landscape. Burning Glass also assessed the average salary premia, total job openings, key occupations, and fastest-growing sub-specialty skills within each of these skill areas.

For More Information Visit:

www.Burning-Glass.com

Or Contact:

Will Markow

Managing Director – Human Capital Management and Emerging Technologies

wmarkow@burning-glass.com

Scott Bittle

Director of Communications

sbittle@burning-glass.com