



rh

SALARY GUIDE 2020

TECHNOLOGY

 **Robert Half®**
Technology



Calculate custom salaries for individual roles with the **Salary Calculator**.

CONTENTS

2

Your Guide to Starting Salaries for 2020

3

IT Hiring Trends

5

Technology Positions in High Demand

8

Hotbeds for Hiring

9

How to Use Our Salary Tables

10

Technology Salaries: United States

14

Adjusting Salaries for U.S. Cities

17

Hiring Outlook for Canada

19

Technology Salaries: Canada

23

Adjusting Salaries for Canadian Cities

24

Trends in Benefits, Perks and Incentives

26

Tools for Hiring Top Talent

27

A Labor Model for the Digital Age

28

About Us



YOUR GUIDE TO STARTING SALARIES FOR 2020



In a job market where skilled candidates can virtually write their own ticket, employers need to be familiar with emerging hiring trends and what other companies are paying for top talent. The 2020 Robert Half Technology Salary Guide gives you insight into both.

Salary forecasts are based on the job placements we make every day as a professional staffing firm. Our ground-level knowledge of labor market conditions across North America means we often know first where salaries are headed. That gives you a leg up as you plan hiring budgets for the coming year.

Robert Half has been reporting on compensation trends since 1950, and during that time millions of employers have relied on our annual guides.

For personalized assistance, contact Robert Half Technology staffing and recruiting experts [online](#) or at [1.877.336.4854](tel:1.877.336.4854).

IT HIRING TRENDS

Disruptive technologies will prompt changes in many enterprises in 2020 and beyond. Organizations want to expand and launch even more digital initiatives. But one key obstacle stands in their way: a persistent shortage of skilled technology workers.

Talent shortfall a barrier for all tech projects

In a Robert Half Technology survey, 67% of IT managers said they want to expand their teams in areas such as security, cloud computing and business intelligence, but 89% reported challenges in recruiting that talent. For organizations seeking professionals with deep experience in emerging areas like machine learning, AI, XR, and blockchain, the challenge is even more difficult. This talent is exceedingly rare, according to the Robert Half Technology staffing specialists interviewed for this year's guide.

Staffing challenges not just an 'IT problem'

A technology talent shortage can impact a business far beyond its IT department. Digital initiatives are often enterprisewide in their scope and scale. That could mean completely revolutionizing operations in the front and back office and even a company's

approach to the marketplace. Without skilled IT talent behind them, these efforts can fail to meet expectations — or never even get off the ground.

Competitive compensation a must

Particularly for the hottest roles (see [Page 5](#)), job candidates expect an attractive salary. Employers also need to consider offering compelling benefits such as flexible schedules, remote work options and professional development opportunities. Keep in mind that skilled technology workers will often have other job offers they will be comparing to yours.



Forward-thinking companies know that competition for top candidates is intense, so they're prepared to offer generous compensation and benefits packages, as well as flexible schedules and more work-life balance options.

— Robert Half Technology recruiter in Irvine, Calif.





TOP BARRIERS TO BRINGING ON TALENT

IT managers were asked to name their biggest hurdles to hiring. The top responses included:


1. Inadequate compensation
2. Slow hiring process
3. Candidates' unfamiliarity with company
4. Competition with other firms
5. Lack of attractive perks and benefits

Source: Robert Half Technology survey of more than 2,800 IT decision makers in the United States



Employers need balance of speed and caution

A streamlined hiring process is imperative in the current environment, where top candidates won't wait around very long for a decision. Even so, employers must take the time to confirm that they and their top candidate are a good match before making an offer. Almost all (95%) of the IT hiring decision makers interviewed for a Robert Half Technology survey admitted to having made a bad hire at some point in their career. Most said that they failed to assess the new employee's technical abilities, interpersonal skills or corporate culture fit.



We spend a lot of time educating employers about the market and how quickly things move. You need to be engaged and have a refined hiring process.

— Robert Half Technology recruiter in Salt Lake City



TECHNOLOGY POSITIONS IN HIGH DEMAND

In 2020, expect employers across North America to hire for many of the roles listed below. Hiring managers will also specifically seek candidates who have the expertise and certifications listed on the following page.

- AI specialists (programmers, engineers)
- Blockchain developers and engineers
- Business intelligence analysts
- Cloud specialists (engineers, architects, systems engineers)
- Data specialists (engineers, scientists, visualization experts)
- Developers (web, software, mobile, VR/AR/MR)
- DevOps engineers
- Full-stack developers
- Help desk and desktop support professionals
- IoT specialists (architects, engineers)
- Machine learning specialists
- Network administrators
- Security specialists (data, information, network, systems, cloud)
- Systems administrators



IN-DEMAND SKILLS AND EXPERTISE

- .NET
- Agile and Scrum
- AI
- Angular
- Apache Spark
- Big data and business intelligence
- Blockchain
- C#
- Cloud (AWS, Azure, Google)
- Databases
- DevOps
- Golang
- Hadoop
- ITIL
- Java
- JavaScript
- Linux
- Machine learning
- PHP
- Python
- ReactJS and React Native
- Ruby on Rails
- Scala
- SaaS
- Virtualization
- VR/AR/MR/XR

TOP CERTIFICATIONS

- Certified Data Professional (CDP)
- Certified Information Systems Security Professional (CISSP)
- Cisco Certified Internetwork Expert (CCIE)
- Cisco Certified Network Associate (CCNA)
- Cisco Certified Network Professional (CCNP)
- Certified Information Systems Auditor (CISA)
- CompTIA A+
- Microsoft Certified Solutions Associate (MCSA)
- Microsoft Technology Associate (MTA)
- Oracle Database Certifications: Database Application Development, MySQL, Oracle Database
- Project Management Professional (PMP)
- Salesforce Certified Development Lifecycle and Deployment

Salaries may be 5% to 10% higher for professionals who possess these skills or certifications.



SOUGHT-AFTER SOFT SKILLS

Strong interpersonal skills are also a must for technology jobs today, as people are increasingly focusing on strategy while machines handle the routine or repetitive tasks. Digital transformation efforts meant to bring the business closer to its customers are also placing greater emphasis on soft skills for tech roles, including the following:

- Adaptability and flexibility
- Business analysis and critical thinking
- Collaboration
- Commitment to ongoing learning
- Customer service mindset
- Leadership qualities
- Verbal and written communication skills

Upskilling a priority in most IT departments

Finding professionals with in-demand technology expertise can take time, but businesses and their IT needs can't always wait. This is prompting organizations to grow skill sets in-house: 90% of technology managers in a Robert Half Technology survey said they are upskilling some or all of their employees. The most common areas for professional development are cloud computing, security, project management, data science, AI and machine learning.

Employers benefiting from flexible staffing

Not every project requires a full-time employee. Organizations can handle changing workloads and business priorities by supplementing their teams with project-based consultants and other interim professionals. Of the IT leaders polled in our survey, 95% said they plan to bring in project professionals to support their core staff. A flexible staffing approach helps managers assemble and deploy teams that can work on a diverse range of complex digital projects and help core staff keep the department's operations running optimally.

HOTBEDS FOR HIRING

Expect these industries to be among those leading IT hiring in the year ahead.

- **Financial services** — Traditional financial institutions and fintech companies are competing for skilled tech talent, especially in areas such as AI, machine learning, blockchain, business intelligence and API development.
- **Healthcare** — Providers are innovating new ways to deliver patient care, including remotely, by expanding their use of AI, data analytics, AR and MR. Data security also remains an important area of hiring for this industry due to the need to protect sensitive patient information.
- **Manufacturing and distribution** — Global connectivity and complexity in this industry are driving digital innovation from the manufacturing floor to the supply chain. Companies are embracing tools such as advanced analytics, AI, robotics, AR and IoT.
- **Technology** — As expected, tech companies are in constant need of highly skilled IT talent to drive business strategies for their organizations. While work with APIs is accelerating, professionals are primarily being called on to build platforms for rapid innovation and to deploy new products and solutions.

HOW TO USE OUR SALARY TABLES

To help you determine salary levels for new hires, we report starting pay ranges in percentiles, as defined on this page. The salary figures are national ranges; you can adjust the figures on the following pages to your market using the local variances on [Pages 14-15](#) for the United States and [Page 23](#) for Canada. Bonuses, benefits and

other forms of compensation are not built into the starting salary ranges. Compensation is affected by many factors, including labor market demand for the position and individual negotiation during the hiring process. For more guidance on starting salaries, contact your local Robert Half Technology staffing professional.

To help set starting pay, determine where your candidate best fits in the four percentiles below.

25TH

The candidate may be new to the role and still developing relevant skills.

The role may be at a smaller organization or one with few business units.

50TH

The candidate may have an average level of experience plus the majority of relevant skills.

The role may be at a midsize organization or one with many business units or moderately complex operations.

75TH

The candidate may have more experience than is typical and most or all relevant skills.

The role may be at a larger organization or one with multiple business units or complex operations.

95TH

The candidate may have a high level of relevant experience and expertise.

The role may be uniquely complex or the candidate may bring a specialized set of hard-to-find skills.

The role may be at a larger organization or one with multiple business units or complex operations.

		PERCENTILES			
TITLE		25 TH	50 TH	75 TH	95 TH
Executive Leadership	Chief Information Officer (CIO)	174,750	208,750	252,000	298,750
	Chief Technology Officer (CTO)	152,250	186,250	226,750	266,000

TECHNOLOGY SALARIES

UNITED STATES

TITLE		PERCENTILES			
		25 TH	50 TH	75 TH	95 TH
Executive Leadership	Chief Information Officer (CIO)	174,750	208,750	252,000	298,750
	Chief Technology Officer (CTO)	152,250	186,250	226,750	266,000
	Chief Security Officer (CSO)	155,250	187,250	228,750	278,000
	Vice President of Information Technology	143,750	172,750	206,500	239,250
	Director of Technology	123,750	147,750	176,750	205,500
Software & Applications Development	Manager	110,500	135,750	162,250	188,750
	Product Manager	102,750	125,500	149,500	175,000
	Project Manager	94,500	113,000	135,750	159,000
	Scrum Master	76,500	97,750	114,500	135,000
	Mobile Applications Developer	121,750	146,500	175,750	206,500
	Applications Architect	117,500	141,750	170,750	197,250
	Lead Applications Developer	107,000	128,750	154,500	183,250
	Software Engineer	105,750	125,750	150,250	178,000
	Software Developer	99,250	120,750	143,000	171,000
	DevOps Engineer	93,000	115,750	138,750	179,250
	CRM Technical Developer	92,500	110,500	132,250	154,500
	CRM Business Analyst	82,250	99,500	119,250	138,250
	ERP Technical Developer	98,500	118,000	141,000	164,750

TECHNOLOGY SALARIES

United States

		PERCENTILES			
TITLE		25 TH	50 TH	75 TH	95 TH
Software & Applications Development (continued)	ERP Technical/Functional Analyst	93,750	112,000	135,000	156,750
	ERP Business Analyst	86,750	105,000	125,500	146,500
	Developer/Programmer Analyst	87,750	108,500	129,750	153,000
	Cloud Computing Analyst	78,000	98,250	121,250	164,250
	Business Systems Analyst	81,000	96,000	117,250	138,000
	Systems Analyst	80,500	95,500	114,250	135,500
	Technical Writer	57,250	68,500	82,750	97,000
Web Development	Senior Web Developer	102,750	123,000	147,000	174,000
	Web Developer	86,000	104,750	124,750	146,250
	Front-End Web Developer	67,000	81,750	99,000	132,000
	Web Administrator	70,000	84,750	101,500	119,500
	E-Commerce Analyst	85,250	101,500	121,750	142,250
Consulting & Systems Integration	Director	121,000	145,000	173,000	206,000
	Manager	97,250	121,000	140,250	164,500
	Senior Consultant	85,250	97,500	111,750	125,000
	Staff Consultant	60,000	71,250	81,000	92,000
Data/Database Administration	Big Data Engineer	130,000	163,250	193,750	222,000
	AI Architect	120,250	143,750	161,250	189,000
	Data Architect	119,750	141,250	163,500	193,500
	Data Scientist	105,750	125,250	152,000	180,250
	Data Modeler	80,750	101,750	125,750	170,000
	Database Manager	111,250	133,500	158,500	186,500

TECHNOLOGY SALARIES

United States

TITLE		PERCENTILES			
		25 TH	50 TH	75 TH	95 TH
Data/Database Administration (continued)	Database Developer	101,250	121,500	145,250	172,750
	Database Administrator	79,250	100,250	120,250	160,500
	Business Intelligence Analyst	87,500	110,250	136,250	185,500
	Data Analyst/Report Writer	83,750	100,250	118,750	142,500
	Data Warehouse Analyst	80,000	99,250	122,500	160,250
	Data Reporting Analyst	62,500	78,500	94,750	117,250
Quality Assurance (QA) & Testing	QA/Testing Manager	88,750	103,250	120,500	143,250
	QA Engineer — Automated	74,250	88,500	105,250	124,000
	QA Engineer — Manual	63,750	76,000	86,500	102,750
	QA Associate/Analyst	64,000	76,500	91,500	109,000
Networking/ Telecommunications	Network/Cloud Architect	117,500	141,750	169,500	196,250
	Network/Cloud Manager	97,500	120,000	141,750	169,750
	Wireless Network/Cloud Engineer	105,000	123,750	148,750	178,750
	Network/Cloud Engineer	94,750	112,000	134,500	159,000
	Network/Cloud Administrator	76,250	92,500	110,250	129,500
	Telecommunications Manager	83,750	103,750	120,500	140,000
	Telecommunications Specialist	60,000	72,250	86,000	101,250
	NOC Technician	53,750	64,500	79,250	101,750
Security	Information Systems Security Manager	119,500	143,250	172,250	205,750
	Security Architect	116,250	130,750	150,250	181,500
	Data Security Analyst	108,250	129,000	154,000	183,500

**TECHNOLOGY
SALARIES**
United States

TITLE		PERCENTILES			
		25 TH	50 TH	75 TH	95 TH
Security (continued)	Network Security Engineer	101,500	119,750	143,000	168,500
	Network Security Administrator	94,750	113,500	137,000	160,500
	Systems Security Administrator	96,500	116,000	138,250	162,750
Technical Services & Operations	Manager	107,500	130,250	157,750	185,250
	Site Reliability Engineer	99,750	122,000	148,750	197,000
	IT Auditor	95,250	114,250	136,750	162,500
	Business Continuity Analyst	89,750	108,000	129,000	152,750
	Systems Engineer	88,750	106,000	125,750	148,000
	Systems Administrator	69,250	84,750	102,750	117,250
	Hardware Analyst	63,000	75,750	90,750	107,500
	Instructor/Trainer	59,500	71,000	85,000	100,500
	Mobile Device Support Analyst	58,000	69,250	83,250	98,750
	Mainframe Systems Programmer	53,750	68,500	85,500	96,750
	Desktop Support Analyst	49,750	61,500	73,500	86,500
	Help Desk Tier 3	50,500	60,250	72,000	83,000
	Help Desk Tier 2	41,500	50,000	56,500	65,250
	Help Desk Tier 1	34,250	40,500	47,500	56,750
	Product Support Specialist	47,250	56,500	68,750	82,250
	Cable Technician	34,000	43,250	52,500	57,250
	Computer Operator	35,000	42,250	50,250	59,250
	PC Technician	33,500	40,250	47,500	55,500

ADJUSTING SALARIES FOR U.S. CITIES

Calculate starting salaries for specific roles with the **Salary Calculator**.

The salary ranges in our guide are backed by Robert Half Technology data, the expertise of our local staffing managers, independent research and Robert Half Technology surveys of senior executives across North America. To customize compensation for your area, increase or decrease the national salary reported on previous pages by the percentage for your city. Market variances are reflective of all industries and professions.

Alabama

Birmingham	-5%
Huntsville	-5%
Mobile	-14%

Arizona

Phoenix	+17%
Tucson	+7%

Arkansas

Fayetteville	-5%
Little Rock	-5%

California

Fresno	-8%
Irvine	+30%
Los Angeles	+32%
Monterey	+15%
Oakland	+34%
Ontario	+20%
Sacramento	+8%
San Diego	+29%
San Francisco	+41%

San Jose	+40%
San Rafael	+32%
Santa Barbara	+27%
Santa Rosa	+22%
Stockton	-13%

Colorado

Boulder	+19%
Colorado Springs	-2%
Denver	+11%
Fort Collins	+0%
Greeley	-11%
Loveland	-5%
Pueblo	-17%

Connecticut

Hartford	+17%
New Haven	+12%
Stamford	+31%

Delaware

Wilmington	+5%
------------	-----

District of Columbia

Washington	+33%
------------	------

Florida

Fort Myers	-8%
Jacksonville	-3.5%
Melbourne	-9%
Miami/	
Fort Lauderdale	+6%
Orlando	+1%
St. Petersburg	-1.5%
Tampa	+0.5%
West Palm Beach	+4%

Georgia

Atlanta	+6%
Macon	-18%
Savannah	-15%

Hawaii

Honolulu	+7%
----------	-----

Idaho

Boise -11%

Illinois

Chicago +24%

Hoffman Estates +12%

Naperville +12%

Rockford -15%

Indiana

Fort Wayne -16%

Indianapolis -3%

Iowa

Cedar Rapids -5%

Davenport -4%

Des Moines +2%

Sioux City -16%

Waterloo/

Cedar Falls -12%

Kansas

Overland Park +1%

Kentucky

Lexington -8.5%

Louisville -8%

Louisiana

Baton Rouge -1%

New Orleans -1%

Maine

Portland -5%

Maryland

Baltimore +3%

Massachusetts

Boston +34%

Springfield +1%

Michigan

Ann Arbor +1%

Detroit +0%

Grand Rapids -14%

Kalamazoo -20%

Lansing -15%

Minnesota

Bloomington +6.5%

Duluth -20.4%

Minneapolis +7%

Rochester +2%

St. Cloud -14%

St. Paul +4%

Missouri

Kansas City -0.5%

St. Joseph -10%

St. Louis +0.5%

Nebraska

Omaha +0%

Nevada

Las Vegas +2%

Reno +1%

New Hampshire

Manchester +12%

Nashua +14%

New Jersey

Mount Laurel +15%

Paramus +30%

Princeton +25%

Woodbridge +26.5%

New Mexico

Albuquerque -8.5%

New York

Albany -4%

Buffalo -6.5%

Long Island +25%

New York +40.5%

Rochester -6.5%

Syracuse -9.7%

North Carolina

Charlotte +3%

Greensboro +0%

Raleigh +4%

Ohio

Akron -11%

Canton -18%

Cincinnati -2.5%

Cleveland -4%

Columbus -2%

Dayton -13%

Toledo -14%

Youngstown -24%

Oklahoma

Oklahoma City -7%

Tulsa -7%

Oregon

Portland +11%

Pennsylvania

Harrisburg -5%

Lehigh Valley +0%

Philadelphia +15%

Pittsburgh -2%

Reading -5%

Rhode Island

Providence +1.5%

South Carolina

Charleston -5%

Columbia -6.5%

Greenville -6%

South Dakota

Sioux Falls -16%

Tennessee

Chattanooga -11%

Cool Springs +0%

Knoxville -11%

Memphis -5%

Nashville +1.5%

Texas

Austin +9%

Dallas +11%

El Paso -28%

Fort Worth +10%

Houston +8%

Midland/Odessa +10%

San Antonio +1%

Utah

Salt Lake City +8%

Virginia

Norfolk/

Hampton Roads -1.5%

Richmond -1%

Tysons Corner +32%

Washington

Seattle +27%

Spokane -18%

Wisconsin

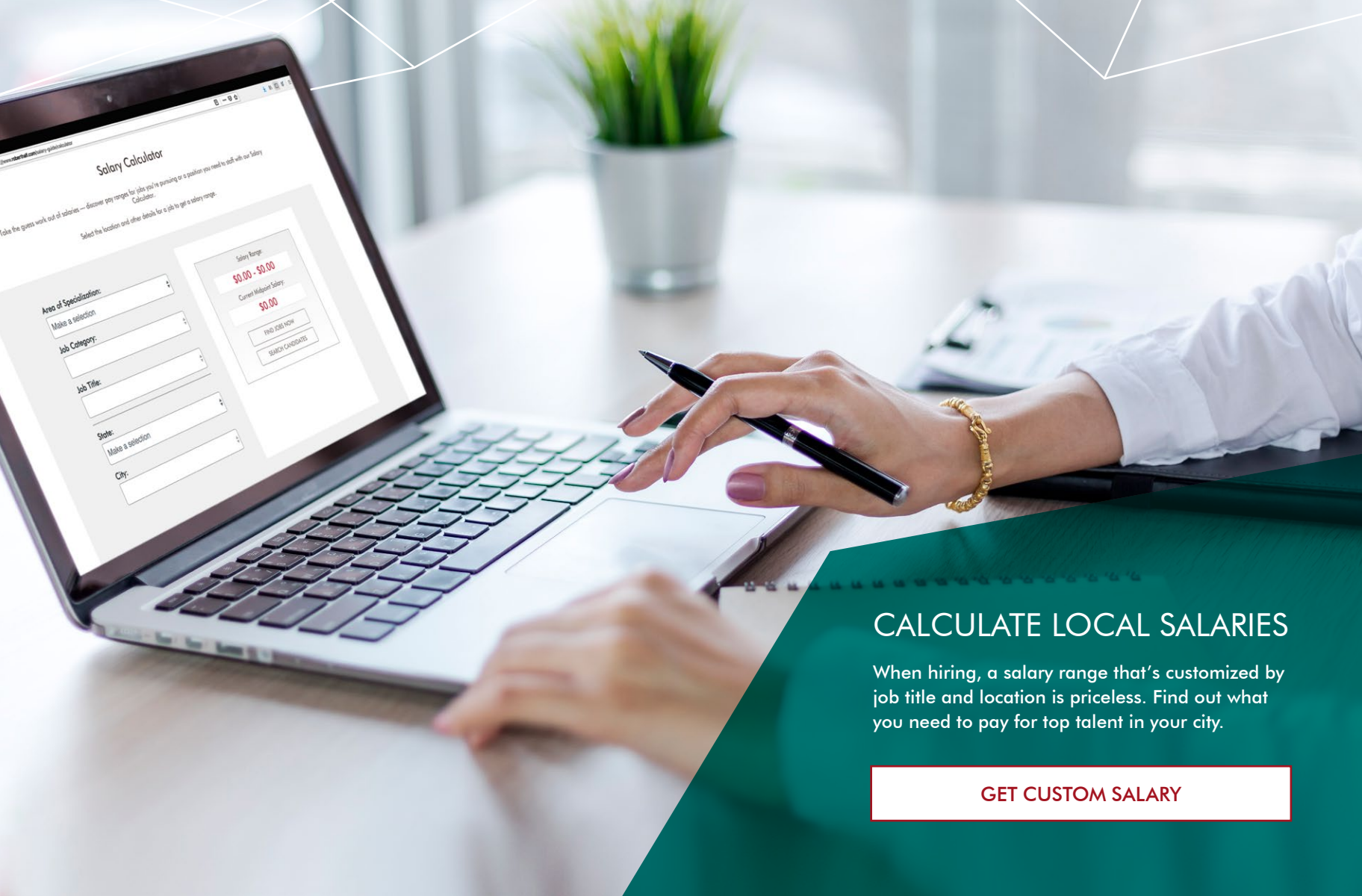
Appleton -15%

Green Bay -13.5%

Madison +1%

Milwaukee +2%

Waukesha +1%



CALCULATE LOCAL SALARIES

When hiring, a salary range that's customized by job title and location is priceless. Find out what you need to pay for top talent in your city.

[GET CUSTOM SALARY](#)

HIRING OUTLOOK FOR CANADA

Canada's strong focus on growing entrepreneurial communities — areas with a high concentration of entrepreneurs and a high business startup rate — along with its immigration policies are playing a role in helping employers attract skilled technology talent from around the globe. Many startups are launching ventures in areas such as Calgary and Toronto, and top tech firms are expanding their operations there as well.

This is the hottest market I have seen in my 13 years with Robert Half Technology. In this tight market, it's very hard to find top candidates because most are already employed.

— Robert Half Technology recruiter in Mississauga, Ontario

As Canada becomes a growing hub for research, development and investment, one distinct advantage firms may have is access to emerging technology expertise. Even so, employers still need to work hard to secure skilled tech talent — especially senior-level professionals — due to the intense demand for these workers. Companies must be prepared to offer competitive compensation, as well as coveted perks such as professional development options and generous vacation time.

Look for IT hiring in industries such as finance, manufacturing, retail and healthcare to remain robust in 2020. In-demand positions that many Canadian employers will seek to hire for include blockchain developers; web, software and mobile developers; full-stack developers; DevOps engineers; machine learning and AI specialists; and cybersecurity and cloud technology experts.



INSIGHTS FROM IT HIRING MANAGERS

59% of IT hiring decision makers in Canada plan to expand their teams.

82% report challenges finding skilled technology professionals.

TOP AREAS FOR HIRING



Cybersecurity



Cloud security, computing and architecture



Business intelligence

Source: Robert Half Technology survey of more than 270 senior managers in Canada



TECHNOLOGY SALARIES

CANADA

TITLE		PERCENTILES			
		25 TH	50 TH	75 TH	95 TH
Executive Leadership	Chief Information Officer (CIO)	156,000	175,500	211,000	263,000
	Chief Technology Officer (CTO)	145,000	171,750	192,000	244,500
	Chief Security Officer (CSO)	138,750	165,000	188,000	241,250
	Vice President of Information Technology	133,500	155,750	181,500	221,500
	Director of Technology	110,750	131,500	161,250	174,250
Software & Applications Development	Manager	100,250	125,750	156,000	210,250
	Product Manager	87,750	98,000	121,250	141,500
	Project Manager	90,750	115,500	131,000	143,500
	Scrum Master	68,750	85,000	99,000	122,750
	Mobile Applications Developer	67,250	84,000	99,500	139,250
	Applications Architect	95,250	130,000	161,500	175,500
	Lead Applications Developer	100,000	122,000	147,500	178,500
	Software Engineer	75,750	95,000	105,000	135,750
	Software Developer	65,000	84,500	92,250	128,500
	DevOps Engineer	88,750	110,500	132,500	144,000
	CRM Technical Developer	87,750	105,000	127,000	149,500
	CRM Business Analyst	84,500	101,750	123,000	144,500
	ERP Technical Developer	96,500	131,000	143,750	171,500

All salaries listed on
Pages 19-22 are in
Canadian dollars.

TECHNOLOGY SALARIES Canada

TITLE		PERCENTILES			
		25 TH	50 TH	75 TH	95 TH
Software & Applications Development (continued)	ERP Technical/Functional Analyst	102,500	133,250	150,000	159,750
	ERP Business Analyst	92,500	117,250	130,750	142,250
	Developer/Programmer Analyst	64,750	77,750	91,500	123,750
	Cloud Computing Analyst	75,500	97,500	119,750	161,500
	Business Systems Analyst	67,000	95,000	117,500	130,000
	Systems Analyst	82,750	89,750	96,500	114,000
	Technical Writer	58,000	68,250	82,500	98,000
Web Development	Senior Web Developer	86,250	105,750	123,500	147,750
	Web Developer	69,750	79,500	88,250	102,250
	Front-End Web Developer	66,750	78,000	89,750	103,750
	Web Administrator	64,500	77,500	90,000	103,750
	E-Commerce Analyst	80,750	109,250	131,000	137,500
Consulting & Systems Integration	Director	101,000	126,500	158,750	205,000
	Manager	100,250	120,000	156,000	190,250
	Senior Consultant	102,500	111,500	144,500	160,750
	Staff Consultant	66,500	78,750	97,500	110,250
Data/Database Administration	Big Data Engineer	108,750	131,000	155,500	190,000
	AI Architect	68,500	89,750	99,500	130,750
	Data Architect	99,500	120,000	143,750	170,250
	Data Scientist	90,750	110,500	133,000	155,500
	Data Modeler	86,000	105,750	116,750	154,000
	Database Manager	97,750	123,250	147,250	184,500

TECHNOLOGY SALARIES Canada

TITLE		PERCENTILES			
		25 TH	50 TH	75 TH	95 TH
Data/Database Administration (continued)	Database Developer	94,000	105,000	134,500	166,000
	Database Administrator	65,250	84,000	113,500	133,750
	Business Intelligence Analyst	82,500	102,750	122,500	153,500
	Data Analyst/Report Writer	59,250	69,500	87,250	120,750
	Data Warehouse Analyst	74,000	93,250	116,500	156,250
	Data Reporting Analyst	52,000	64,500	77,500	99,250
Quality Assurance (QA) & Testing	QA/Testing Manager	79,250	95,000	114,250	143,750
	QA Engineer — Automated	74,000	88,000	106,000	122,000
	QA Engineer — Manual	62,000	76,250	90,000	105,250
	QA Associate/Analyst	62,500	82,000	97,000	116,500
Networking/ Telecommunications	Network/Cloud Architect	110,000	125,000	134,750	152,500
	Network/Cloud Manager	95,000	108,000	130,000	142,250
	Wireless Network/Cloud Engineer	93,500	100,000	121,750	146,000
	Network/Cloud Engineer	78,000	98,750	109,000	130,500
	Network/Cloud Administrator	59,500	70,000	85,750	111,250
	Telecommunications Manager	73,000	85,250	105,500	142,500
	Telecommunications Specialist	64,500	75,000	85,750	101,000
	NOC Technician	55,500	69,250	82,250	97,750
Security	Information Systems Security Manager	100,000	119,750	131,500	192,500
	Security Architect	90,500	111,750	130,500	172,000
	Data Security Analyst	103,000	121,000	139,750	173,500

TECHNOLOGY SALARIES Canada

		PERCENTILES			
TITLE		25 TH	50 TH	75 TH	95 TH
Security (continued)	Network Security Engineer	97,000	115,000	130,750	176,750
	Network Security Administrator	83,500	100,000	122,500	140,250
	Systems Security Administrator	89,500	102,000	127,500	146,500
Technical Services & Operations	Manager	85,000	110,250	138,750	160,000
	Site Reliability Engineer	77,000	90,500	112,500	144,250
	IT Auditor	79,500	95,500	113,750	129,500
	Business Continuity Analyst	84,250	96,500	110,250	131,000
	Systems Engineer	88,750	97,750	116,750	133,500
	Systems Administrator	68,000	81,500	100,000	108,250
	Hardware Analyst	53,500	67,250	86,000	101,250
	Instructor/Trainer	57,250	68,000	82,250	98,000
	Mobile Device Support Analyst	44,000	51,000	67,750	86,250
	Mainframe Systems Programmer	58,000	73,750	92,250	113,750
	Desktop Support Analyst	55,750	64,250	73,500	85,000
	Help Desk Tier 3	60,250	71,000	77,500	88,250
	Help Desk Tier 2	51,250	60,250	62,750	77,500
	Help Desk Tier 1	42,750	52,500	57,500	61,500
	Product Support Specialist	42,500	52,500	65,000	83,250
	Cable Technician	38,750	47,500	57,250	68,000
	Computer Operator	37,750	41,250	48,500	57,750
	PC Technician	35,750	42,500	50,500	61,500

ADJUSTING SALARIES FOR CANADIAN CITIES

Calculate starting salaries for specific roles with the **Salary Calculator**.

The salary ranges in our guide are backed by Robert Half Technology data, the expertise of our local staffing managers, independent research and Robert Half Technology surveys of senior executives across North America. To customize compensation for your area, increase or decrease the national salary reported on previous pages by the percentage for your city. Market variances are reflective of all industries and professions.

Alberta

Calgary	+5.2%
Edmonton	+3.2%

British Columbia

Fraser Valley	+1.8%
Vancouver	+4.9%
Victoria	-2.2%

Manitoba

Winnipeg	-5%
----------	-----

Ontario

Kitchener/ Waterloo	-2.5%
Ottawa	+0.5%
Toronto	+5%

Quebec

Montreal	+3.1%
Quebec City	-6%

Saskatchewan

Regina	-5.1%
Saskatoon	-3.5%

TRENDS IN BENEFITS, PERKS AND INCENTIVES

MOST COMMON BENEFITS OFFERED BY EMPLOYERS*

The percentage of companies that offer each benefit:

Health insurance



Paid time off**



Dental insurance



Retirement savings plan



Vision insurance



* Multiple responses were permitted. Top responses are shown.

** Paid time off includes vacation, sick days and paid holidays.

*** The responses do not total 100% due to rounding.

WELLNESS PROGRAMS***

Companies are offering a range of benefits that extend beyond traditional health insurance. Here is a summary of other types of benefits and how costs are allocated.

	Physical Wellness (e.g., gym access)	Mental Wellness (e.g., stress reduction)	Financial Wellness (e.g., retirement planning)
Companies where costs are employer-paid	40%	50%	38%
Companies where costs are employee-paid	12%	10%	14%
Companies where costs are shared	11%	14%	13%
Companies that do not offer these benefits	37%	27%	35%

WELLNESS OFFERINGS WORKERS VALUE MOST***

The percentage of workers that value each option:

Access to fitness facilities or programs	24%
Ergonomic evaluations and equipment	22%
Wellness incentives (offering prizes for engaging in healthy behavior)	18%
Healthy food options	14%
Stress management resources	14%
On-site vaccinations or health screenings	9%

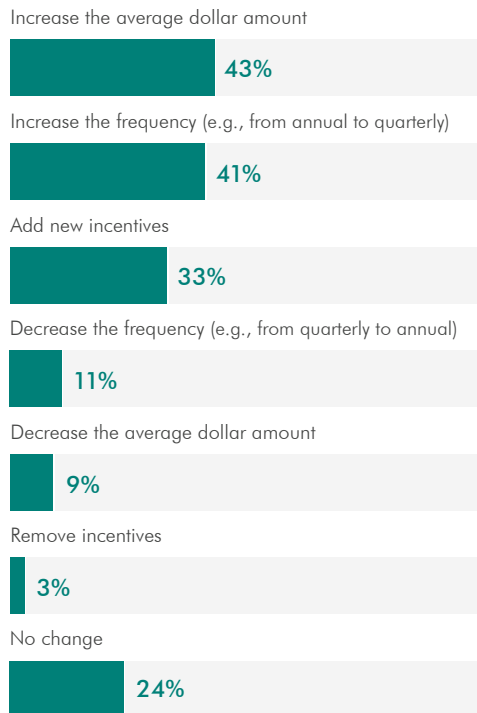
MOST COMMON PERKS OFFERED BY EMPLOYERS*

The percentage of companies that offer each benefit:



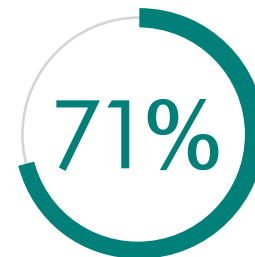
CHANGES TO INCENTIVE OFFERINGS*

The percentage of companies that plan to make the following changes to their incentive offerings in 2020:



What are incentives?

- Motivational rewards
- Tied to job performance
- Examples: Spot awards, profit-sharing, bonuses, stock



of companies plan to offer incentives to staff-level employees in 2020.

Source: Robert Half surveys of more than 1,000 HR managers and more than 2,000 workers in North America

TOOLS FOR HIRING TOP TALENT

Robert Half's research on hiring and workplace trends offers additional insight into today's employment environment. To find out more, [download the reports](#).



Jobs and AI Anxiety

Our exclusive research and expert insights answer questions about the future of work.

- What jobs will advanced technology create or take away?
- What skills will you be hiring for in the future? How soon will you have to think seriously about that?
- Will adoption of new technologies boost or hinder employee retention?



The Demand for Skilled Talent

Take a look into the most recent employment market trends, based on government data and Robert Half's surveys of employers across North America.

- How competitive is hiring right now?
- What are the most in-demand positions?
- How do you secure your choice of job candidates and retain your best workers?



Organizational Culture: The Make-or-Break Factor in Hiring and Retention

Your corporate culture can greatly affect your ability to recruit and keep top talent.

- What aspects of company culture are candidates most drawn to?
- How can you create a positive buzz about your workplace?
- What interview questions will help you identify candidates most likely to excel in your work environment?

A LABOR MODEL FOR THE DIGITAL AGE

In 2020, companies will continue to look to their IT departments for help in pursuing digital transformation initiatives. Because of rapidly advancing technology and the fact that IT professionals must now collaborate with more areas of the business than ever before, projects are becoming increasingly complex. As a result, many departments are finding they lack the internal expertise and the time to go it alone when pursuing these initiatives. Worse, many projects can materialize suddenly, forcing managers to proceed without the advance planning and resource buildup they would have preferred.

In response, IT organizations are embracing a new labor model based on a flexible mix of talent. To augment their full-time employees, managers contract with one or more outside organizations for additional resources for the duration of a project. These include a scalable mix of specialized interim

professionals along with consulting expertise that offers a strategic plan, project oversight and targeted technologies. In some cases, the company asks an outside resource to fully handle the management of a project or new business function.

The use of interim employees and flexible staffing by itself is, of course, nothing new. Supplementing core IT teams with temporary staff to provide coverage and specialized expertise is increasingly common as a cost-effective way for firms to access talent for jobs that don't require a full-time employee. But large-scale projects, especially those required as a quick competitive response, can overwhelm internal resources both from an implementation and a project management perspective. The new labor model gives IT departments access to the talent they need to pursue complex initiatives.



ABOUT US

Robert Half Technology places highly skilled IT professionals with organizations of all sizes and talent needs on a contract, contract-to-hire and full-time basis. We deliver cost-effective staffing for a wide range of technology and digital projects to help organizations operate, innovate and compete in a rapidly changing and increasingly digitized business environment. Our **Salaried Professional Service** provides specialized consultants with difficult-to-find skills for long-term projects.

Our personalized service, combined with our AI-based matching technology that incorporates decades of placement data with current market trends, distinguishes us from other staffing firms. And with more than 120 locations worldwide, we know your local market inside and out and can help you find the right fit quickly.

Through **Protiviti**, a Robert Half subsidiary, you have access to consulting solutions in finance, technology, operations, data, analytics, governance, risk and internal audit.

Robert Half also offers specialized staffing services in accounting and finance, marketing and creative, legal, and administration to help meet all your hiring needs.



FIND THE RIGHT FIT

You don't need just any candidate.
You need one that matches your unique
job requirements and corporate culture.
Let Robert Half Technology help you find
the right fit.

[START HIRING](#)

Find an **office near you** or call **1.877.336.4854**
for personalized assistance.



2884 Sand Hill Road
Menlo Park, CA 94025
1.877.336.4854

rht.com

