decide,

HOW TO GET HIRED IN INFORMATION TECHNOLOGY Get Your IT or Software Career Started

- Why Getting in IT or Software is a Better Move than You Think
- What Training and Education Options are Best for You
- Formatting your Resume and LinkedIn Profile to get Noticed
- Getting Experience
- What Skills are in Demand

ABOUT THIS GUIDE

Congratulations, you are looking to get into the Information Technology or Software jobs markets. Not only is there room for you, there is demand for you. In May 2021, there were over 700 distinct technical recruiting firms posting jobs for IT personnel.

The IT and software jobs markets have boomed. There is job security for people with the skills. Pay has been going up. Recruiters are actively hunting for people with quality skills and the recruiters' job is getting harder.

For People who want to work in IT or Software Workers, this guide will give you teach you:

- What skills are in demand
- Salary ranges for those skills
- Certification overview
- Pros and Cons for Training Options
- Trends for the IT and Software Job Market
- How to get experience
- How Digital Transformations will affect the Job Market
- How to be seen by recruiters
- How to get hired!



HOW MANY PEOPLE WORK IN IT AND SOFTWARE IN THE US*?

January	2019	5,139,000	February	2020	5,672,000
February	2019	5,392,000	March	2020	5,653,000
March	2019	5,237,000	April	2020	5,735,000
April	2019	5,175,000	May	2020	5,763,000
May	2019	5,308,000	June	2020	5,990,000
June	2019	5,443,000	July	2020	5,856,000
July	2019	5,578,000	August	2020	5,533,000
August	2019	5,562,000	September	2020	5,209,000
September	2019	5,421,000	October	2020	5,351,000
October	2019	5,423,000	November	2020	5,223,000
November	2019	5,259,000	December	2020	5,614,000
December	2019	5,262,000	January	2021	5,692,000
January	2020	5,632,000	February	2021	5,870,000

Even with job losses from the pandemic, there are still 217,000 more people working in IT AND SOFTWARE in the last year and 633,000 more in the last 2 years. That is a 12.1% Gain in TWO YEARS.

Every month the Bureau of Labor Statistics publishes employment numbers.
Each month Decide digs into the BLS numbers a bit more and pulls out the data relating to Information Technology and Software. We create a monthly report based on this data. While the monthly IT and software jobs reported each month is based on the BLS statistical modeling, it does provide an accurate reflection to the direction of job gains.

IT AND SOFTWARE JOBS ARE BACK



At Decide Consulting, we pull all the jobs posted on well-known job boards. These include jobs posted by recruiting firms, consulting companies and origin companies. We define an origin company as any company NOT in the business of recruiting or providing information technology services. Think of an origin company as Exxon or Chase.

During the Pandemic, new job postings took a nosedive. IT and Software Job Openings have surpassed Pre-Pandemic Levels HOUSTON IT JOBS POSTED SINCE COVID STARTED 1700 1450 NORMA 1100 750 ACTUAL SURPASSED PRE-COVID LEVEL 400 0 Feb Mar June July Oct Feb Apr Mav Aug Sept Nov Dec Jan

There is some seasonality to the job posting cycle, but it's not complicated. The rate of job posting slows down in June and July when many people are on vacation. Waiting for the CFO to come back from Cancun to sign off on the budget is a regular occurrence.

vthon

HTML

For the same reason, December is another slow month, while April and October tend to be the busiest months for job postings. Our pre-COVID expectation was to see over 1300 jobs posted each week in April. Instead, this was the number we saw posted over the entire month.

When COVID first came on the scene in early 2020, job postings and hiring took a nosedive and stayed down for a while. Job postings for IT and software positions have now surpassed their pre-COVID levels.

The number of IT and software job postings in Houston for January 2021 are at 111% of pre-COVID levels. Companies are hiring again with a vengeance. This is a clear sign companies are actively progressing on their 2021 Digital Transformation strategies. and hiring took a nosedive. Even before the first COVID case in Houston, companies tapped the breaks on bringing on new people. "There was a lot of uncertainty in the market. We saw the shutdowns in Asia and wondered if it could happen here." says David Moise, President of Decide Consulting.

"Job postings for software and IT people are a clear indicator how companies feel about investing in information technology. April was the worst point in 2020. The job postings were 25% of normal levels. We broke the thousand jobs posted a week level in the late summer, but as COVID cases went up, jobs went down."

"Depending on the time of year, we see as high as 1600-1700 jobs posted a week for IT and software people. We have been waiting for this moment. Companies are hiring IT and software people more than pre-COVID levels. With the number of companies moving to Texas, we expect fierce competition for technical talent. Google just announced they are opening a Houston office. Everyone is staffing up now."

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Depending on the time of year, we see as high as 1600-1700 jobs posted a week for IT and software people. We have been waiting for this moment. Companies are hiring IT and software people more than pre-Pandemic levels. Everyone is staffing up now. While we have more exact data for Houston, we see the same trends across all cities in the US.





The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday's logic.

– Peter Drucker

BREAKOUT OF POSTED IT AND SOFTWARE JOBS





Most consumers don't mind hearing from brands as long as it is a solution, where we are not trying to sell something, but we are trying to solve something.

> - Kelly Frederickson CEO of MullenLowe

Top Development Job Titles	Top Cloud Job Titles
Software Engineer	AWS Developer
.Net Developer	AWS Support Specialist
Java Developer	Cloud Platform Engineer
Full Stack Developer	Cloud Administrator
Python Developer	Cloud Solution Architect
Top Architect Job Titles	Top Data Science Job Titles
Solutions Architect	Data Engineer
Software Architect	Data Scientist
Azure Architect	ETL Developer

Machine Learning Engineer

if you dislike change, you're going to dislike

Big Data Architect

– Eric Shinseki

irrelevance even more



WHAT JOBS ARE COMING -DIGITAL TRANSFORMATION



The companies that have done well during the COVID shutdown are the ones who have invested in **Digital Transformation**. What is Digital Transformation? Digital transformation can be a catch-all phrase and is often overused today. Let's nail down what it means with some examples.

On one end of the spectrum is Amazon with everything from drone deliveries and AWS powering the entire operation. On the other end is your local restaurant that offered online ordering with delivery. Both of these operations were able to remain sustainable, or even grow, during the COVID lockdown.

If you thought you heard the term 'Digital Transformation' a lot before COVID, get ready to hear it even more afterwards. Read any briefing by McKinsey, Bain, or Gartner and you'll see the importance they assign to digital transformation.



REMOTE WORK WAS TRENDING BEFORE COVID



Since 2018, IT and software recruiters have been hearing more and more candidates say they want to **work remotely**. Over the last few years, it was not uncommon for an IT worker to ONLY consider remote options for their next assignment. Although IT workers have been requesting remote work for longer than that, it was really beginning to pick up steam in 2018 – 2019.

If you're a **Python/Hadoop developer** or a **DevOps engineer**, you're in **high demand**. It's not uncommon to hear from multiple recruiters every week. Switch your LinkedIn profile to **"open to new opportunities"** and you'll hear from even more recruiters. Pre-COVID, the unemployment rate for IT and software workers was hovering around 2%.

Heading into the Post-Pandemic world, these same in-demand workers had all done at least one remote assignment... and liked it. Can you blame them? They still accomplished the same goals and objectives—yet got more time with their families and didn't have to sit in traffic or step onto a plane.



Regardless, recruiters still struggled to explain to employers why they should consider changing their **come-to-the-office job** to a **remote one**. The employers were concerned about opening the **work-from-home floodgates**. Productivity was a concern. But that **Python developer** was in such high demand that she just had to wait for one potential employer to change their mind. It always happened.

In the **Post-Pandemic economy**, the work-from-home model has fully arrived. We see study after study saying how worker productivity has increased. Candidates and employers should be better matched moving forward.



I don't think we will ever go sit in a doctor's waiting room when we're sick again. We will use telemedicine. The technology that's available will change health care, will change education, will change a lot of things. And I think 5G is going to fuel that.

Tami Erwin – CEO of Verizon

SOFTWARE AND IT JOBS WILL DOUBLE IN 10 YEARS



In 2017, We made a bold statement: Software and IT jobs in the U.S. will double in 10 years. Three years later, we are ahead of pace. While Covid-19 slowed the pace, it did not derail the technology job growth. I am still confident we will see jobs double from the original date. I am also confident we will see IT and software jobs double from now in 10 years. The same reasons apply, and we have now added a few more that will accelerate things.

Each month, my company compiles an economic report based on the Bureau of Labor Statistics data. There were just under 4.7 million people working in IT and software in May 2017. Three years later in June of 2020, we had nearly 6 million. That is 100,000 jobs over the pace needed to double in 10 years.

EVEN WITH COVID-19

In normal times, the unemployment rate for IT and software workers averages 1.5 points lower than the national unemployment rate. When the U.S. unemployment rate was hovering around 4%, IT and software people saw theirs **hover around 2.5%**. Since Covid-19 began, the unemployment rate for IT and software people had its yearly high at **4.3%**. The November 2020 rate was **2.4%**. The IT/software segment has flipped back and forth with legal to have the lowest unemployment rate in the country.



There are two common ideas from recruiters across the country about who in IT lost their jobs — IT managers and people on a contract. Individuals with hands-on technical skills had much greater job security in 2020.

2021 WILL BE A BOOM YEAR

It is hard to read any **technology magazine** or **McKinsey report** that does not make a reference to digital transformation. When the C-suites are inundated with the same piece of advice, they do move in the same direction. A big message from 2020 to the C-suites in America was to embrace digital transformation or get left behind. But how is this going to play out to network engineers and software developers?

I believe big consulting firms are going to have a good year. They will be asked to bid on several DT projects. They need to hire hands-on technical people to work on these projects. Not every company feels the need to bring in Deloitte or Accenture. This does not mean they are going to ignore their own DT projects. Demand for people to do all the digital transformation work is going to be high.

What are the key skills for digital transformation projects? Agile, API programming, cybersecurity, cloud-related skills, DevOps, UI/UX/CX, IoT, big data, data science and ML/AI. In other words, many of the same skills that people already have are listed here, but they're used in slightly different ways.



ALL THE ORIGINAL REASONS IT JOBS WILL DOUBLE

Consider one sliver of the IT landscape — IoT devices. **IDC says** we will have 80 billion IoT devices by 2025. We have close to **5.8 enterprise IoT endpoints in 2020**. For every IoT device out there, we need to do the following:

- Write the embedded code.
- Secure and authenticate the devices.
- Write the API the device calls.
- Secure and authenticate the API.
- Build the network to carry stream data.
- Store the data in a database.
- Set up the servers and the cloud to house these databases.
- Employ a data scientist to make sense of the data.
- Use AI/ML to assist the data scientist.
- Implement multiple user interfaces to have the data make sense.

IoT devices tend to stream data, not send occasional updates. There is an incredible amount of work to be done to accommodate the additional devices coming in the next five years. If that seems like a lot to do, we still have all the work related to machine learning, 5G, mobilizing apps, big data and new projects with low-code/no-code. Then there is all the regular programming and network things we need to do.

HOW DOES THIS AFFECT MY COMPANY?

The competition for existing top technical workers will increase. Posting an ad on a job board is not going to be enough to get experienced people. Companies will need to market and recruit for technical talent differently and more aggressively.

Where are the people to fill these jobs going to come from? Colleges

and universities are creating new graduates in the hundreds, while businesses are demanding in the thousands. Bootcamps, online certifications and continuing education programs will be a big source of education for the new talent. Companies should consider a pipeline of these individuals. Consider reaching out to a local coding boot camp or a university extension that trains people interested in cybersecurity. Share with them your long-term plans for hiring and the technologies you use. Smart companies can get these programs to train potential employees in the technology they use.

It is a very good time to start a career in software development or information technology. The doors are open for more people. When companies are building plans for how to find talent, you want to be in that talent pool.



FINDING AND HIRING IT AND SOFTWARE PEOPLE IS GOING TO BE HARDER

In the months prior to Covid-19, the job market for IT and software people was hot. According to the **Department of Labor Statistics**, the unemployment rate for IT people hovered near 2.3% for all of 2019. Even several months into the Covid-19 economy, the IT sector is competing with the legal profession to have the lowest unemployment rate in the country.



Prior to Covid-19, companies trying to hire top technical talent were **finding it more difficult** to do so. As we emerge from the Covid-19 economy to the recovery, it will become even more difficult to find and retain those software and IT personnel. There are several reasons why.

DIGITAL TRANSFORMATIONS

Pick up **any recent report** from Gartner, Inc., McKinsey & Company or any other top advisory group, and you are quickly **going to hear** some variant of the following statement: *Companies that have thrived during Covid-19 are the ones that invested in digital transformations. The ones that increase their investment in digital transformation first will be the first to recover.* They are correct. Most companies that can point to automation, Agile, DevOps, cybersecurity and cloud initiatives in their technology stack can also point to cost savings and efficiencies.

What exactly digital transformation means to a CIO or CTO can vary. The one constant is that whenever C-suite executives start saying "digital transformation," that translates to bringing in software developers, cloud engineers, scrum masters, QA/QC and all the other associated roles. As we move toward recovery, the topic coming from more C-suite executives will be digital transformation.

5G

The obvious thing about moving to 5G is the increased demand for telecom and infrastructure jobs. That's just the beginning. Around the country, there are mobile app product owners asking themselves, "What will our users want when their data bandwidth goes up 100X?" There is no shortage of answers. Down the hall, the data science team must plan on what to do when their data input goes up by 100X. Uber, Spotify, Instagram and thousands of other companies could not have the impact they do in a 3G world. They required the expanded bandwidth that came with 4G. 5G opens an entirely new tech ecosystem. We will use entirely new software SDKs all the way to new database tools to accommodate 5G.



ARTIFICIAL INTELLIGENCE/MACHINE LEARNING

In 2017, *The New York Times* had a story about graduates from top computer science schools, with training in artificial intelligence, receiving offers up to \$500,000. These are people with no work experience. Artificial intelligence and machine learning have yet to get a foothold in corporate America. It's coming. The best and brightest talents are positioning themselves for these high-paying jobs. This leaves a void for the technology they are not doing.

SPECIALIZATION OF SKILLS

The number of technical tools, libraries, frameworks, SDKs and languages has exploded in the last few years. Not so long ago, if a software developer had JavaScript and jQuery, they were a good candidate for many companies. Not so anymore. Now, it is JavaScript and Angular or React or Vue or Node or one of the 500-plus other frameworks out there. On top of that, the versions of each can be radically different. The same concept applies to every other specialty within IT.





Think of it like this: Just a few short years ago, if a company was looking for a .NET developer in a metaphorical cafeteria, they would have about 20 menu options and would need to match eight. Now, there are 75 options, and they need to match 25.

While there are more people working these jobs, each one is more specialized. The universe of candidates for each role gets smaller as we get more specialized.

WHERE ARE THEY COMING FROM?

If IT and software jobs are going to double, where are all these people going to come from?

Computer science schools are increasing their admissions and expanding programs. Even so, **universities are creating graduates in the hundreds while businesses are demanding in the thousands**. H1Bs have filled many roles, but that getting an H1B is more difficult than it used to be. Bootcamps, online learning and university extension programs are providing more certificates than before.

WHAT CAN A COMPANY DO?

Companies will need to look at backgrounds and educational pedigrees differently if they want the tech talent. Job openings that require a computer science degree may limit hiring options. There are many more ways for individuals to get technical skills.

Companies that are flexible in how people developed their skills will have more options. The technical skills one learns in a CS program are less relevant five years out. It matters much more how an individual continuously learns on their own.

Consider that women make up **less than 10%** of the available software developers. When there is such a demand for skills, companies need to bring in people from different backgrounds and educations if they want to get their work done.

There are many forces creating an increased demand for technical talent. The demand will only increase. How people get the skills to become the next round of talent is evolving. Regardless, today's cloud engineer or full stack developer is in the driver's seat for choosing where they work and for how much.





1 IN 4 PLAN TO SWITCH JOBS POST-PANDEMIC



According to Prudential's latest **Pulse of the American Worker Survey**, 26% of US workers plan to look for a job at a different company once the pandemic has subsided. While white-collar workers, think IT and software, will be eager to move around.

High-skilled technology workers with plenty of opportunities are the hardest to replace. This massive reshuffling also will create major headaches for employers. Millennials plan on leaving in even higher numbers (34%). Millennials make up the largest age group of the IT and software workforce.

Of those planning to leave their current job, 80% are concerned about career growth, and nearly 75% say the pandemic made them rethink their skill sets. "If there's one thing that keeps me up at night, it's the talent flight risk," said Prudential Vice Chair Rob Falzon.

Now that the pandemic's economic threat is easing up, business leaders "need to get back to looking more intently at our talent and ensuring we are giving them opportunities even in a remote environment, or we're going to lose them," Falzon said.



High-performing workers are the most concerned about career advancement in their current jobs, and they no longer feel geographically tied to local employers since remote work has become common.

Worker burnout will also contribute to the "talent shuffle," as workers put in more hours remotely, take less time off, juggle child care duties and deal with general pandemic stress. Some workers may believe they need to change jobs to get a better grip on work-life balance or find a place where they feel more connected.

Nearly half of employees surveyed by Prudential said they feel disconnected to their companies after a year of working remotely. They are missing the benefits of interacting with people outside their teams and getting "face time" with higher-ups in the office. The "culture decay" will lead people to be more likely to hop to a new employer.





BETTER THAN 'LEARN TO CODE'



The technology you use impresses no one. The experience you create with it is everything. - Sean Gerety

'Learn to Code' has been talked of at many levels from presidential candidates to IT managers. It sounds good at a macroeconomic level. The reality is somewhat different. There are not many SW development managers who are willing to hire a person who has been a coal miner for 30 years and has just completed a 6 month C# course. To really make the point, there are not that many SW development managers willing to hire someone who used to code 10 years ago and has been working in other IT jobs since.

'Learn to Code' still has a place, but it is a limited place. Someone more youthful in their career has a better chance of a software development job coming from a 'learn to code' program. It would be great to see less age-discrimination in the software development world, unfortunately we do not live in that world. Code

'Learn to Code' should not be the only topic considered. A huge portion of new tech jobs will go to programmers, there are still plenty of other skills and jobs less reliant on one's programming skills. What about 'Learn to Scrum' or 'Learn to Test'? Here are many other topics we can focus on as alternatives to 'Learn to Code'

Learn to Scrum	Learn to Product Own
Learn to Low Code	Learn to Firewall
Learn to No Code	Learn to Test
Learn to Route NW Traffic	Learn to Script
Learn to Desktop Support	Learn to WordPress
Learn to Network	Learn to HubSpot
Learn to Administer Security Profiles	Learn to Graphic Design
Learn to Recruit	Learn to SEO
Learn to Sell	Learn to Power Bl





THIS HAS Happened before



This is not the only time there was a large boom in IT and software hiring. In the late 1990s, there were several events all happening in the technology space.

The .COM Boom – New internet-based companies were popping up all over. Some of the most valuable companies in the world today, came from this boom. Many of them have just gone away. Pets.com anyone? Regardless, Silicon Valley was a draw to many young technical people. Silicon Valley did not have the market cornered on startups. There were new tech companies sprouting all over in search of Market-Cap glory.

Companies moving from client/server applications to web

applications – M main street business was still trying to move away from Mainframes and AS400s. Many companies were heavy into client/server applications. It was cheaper and quicker to develop in client /server mode than on a mainframe. The problem was first generation client/server apps could not be accessed over the web. Companies very quickly adapted to a web-based model of software development.

Y2K – Not every mainframe application could be moved to the web so quickly. Y2K was a mystery about how bad the impact would be. Turns out it was not much pf an event. Still, companies had a responsibility to correct any software that caused a problem.



Companies had two answers to the talent gap then.

 Outsourcing – While it is commonplace today, taking a software development project and have it coded overseas was new at the time.
Some companies were successful, others struggled. Despite any struggles, outsourcing is cemented in the IT culture today.

2) Hire less experienced or the self-taught – What other options were there? Companies created their own training programs. Projects took a bit longer. The same level of bootcamps or university extension programs we have today did not exist yet. Online training was a way off.

There are thousands of now-Senior IT people who got started in that period. This author knows of music teachers at public schools who went from a teacher's salary in the mid \$30 to six figures in 2 years. Supply and Demand.



CERTIFICATIONS

There are hundreds of IT certifications available. Below are some of the more popular certifications seen in job postings.

COMPTIA A+

Topics

Basics of mobile devices, networking technology, hardware, virtualization and cloud computing and network troubleshooting

Prep Time 10 to 12 weeks if no experience

Prerequisites None. A study course is recommended.

Jobs Applicable Help Desk Technician, Technical Support Specialist, Field Service Technician

Difficulty 1

Exam Cost \$232

COMPTIA NETWORK+

Topics

Validates the knowledge and skills needed to troubleshoot, configure and manage wired and wireless networks

Prep Time 10 to 12 weeks if no experience

Prerequisites None. A study course is recommended.

Jobs Applicable Network Tech, NOC Admin, Technical Support Specialist

Difficulty 2

Exam Cost \$338

COMPTIA SECURITY+

Topics

Information security, including the following, securing applications, networks and devices, threat analysis, response, Risk management

Prep Time 10 to 12 weeks with experience

Prerequisites

None. A study course is recommended and 1-2 years experience.

Jobs Applicable

Security administrator, Junior IT Auditor, Penetration Tester, Network Admin

Difficulty 4

Exam Cost \$370

CCT - CISCO CERTIFIED TECHNICIAN

Topics

Diagnose, restore, repair, and replace critical Cisco networking and system devices

Prep Time 8-10 weeks

with experience

Prerequisites

None. A study course is recommended and 1-2 years experience.

Jobs Applicable

Networking Technician, Network Support Specialist, Network Administrator

Difficulty 3

Exam Cost \$165

CCNA - CISCO Certified Network Associate

Topics

Network fundamentals, network access, IP connectivity, IP services, security fundamentals, and automation and programmability

Prep Time 100-150 hours

Prerequisites

prep with 2-4 years experience

None. A study course is recommended and 2-4 years experience.

Jobs Applicable

Network Administrator, Network Design Engineer, Unified Communications Engineer

Difficulty 6

Exam Cost \$330

GIAC - GLOBAL INFORMATION ASSURANCE CERTIFICATION

Topics

Security's foundation, computer functions and networking, introductory level cryptography, and cybersecurity technologies

Prep Time 8-10 weeks with experience

Prerequisites

None. A study course is recommended and 1-2 years experience.

Jobs Applicable

Non-IT people who need to work in cybersecurity, Security administrator, Junior IT Auditor, Penetration Tester, Network Admin

Difficulty 4

Exam Cost \$2,499

CCIE - CISCO CERTIFIED INTERNETWORK EXPERT

Topics

Intrusion prevention, Connectivity and segmentation, infrastructure security, Identity management

Prep Time 6 to 18 months with 5-7 years experience **Prerequisites** There is a Pre-Qualification exam.

Jobs Applicable

Network Architect, Technical Architect, Senior Network Engineer

Difficulty 10

Exam Cost \$1,600

CEH - CERTIFIED Ethical Hacker

Topics

Methods and tactics employed by those attempting to attack systems/networks

Prep Time 4-6 weeks with 1-2 years experience Prerequisites None.

Jobs Applicable

Information Security Analyst, Computer Forensics Analyst, Security Auditor, Vulnerability Tester

Difficulty 4

Exam Cost \$1,199

ITIL -INFORMATION TECHNOLOGY INFRASTRUCTURE LIBRARY

Topics

Best practices for delivering IT services it standardizes the selection, planning, delivery, and support of IT services

Prep Time 2-4 weeks limited exper Prerequisites None.

Jobs Applicable

IT Support Specialist, Service Desk Technician, Application Analyst

Difficulty 3

Exam Cost \$250

CISSP - CERTIFIED INFORMATION SYSTEMS SECURITY PROFESSIONAL

Topics

Asset Security, Security Architecture and Engineering, Communications and Network Security, Identity Access Management, Security Assessment and Testing, Security Operations, Software Development Security

Prep Time 6-8 months w 5-7 years exp

Prerequisites You must demonstrate 5 years exp

Jobs Applicable

Chief Information Security Officer, Security Architect, Information Security Analyst

Difficulty 9

Exam Cost \$699

CISA - CERTIFIED INFORMATION SYSTEMS AUDITOR

Topics IS/IT auditing, control and security

Prep Time 6-8 months w 5-7 years exp Prerequisites You must demonstrate 5 years exp

Jobs Applicable

IT audit manager, SOC Engineer, Cybersecurity Consultant

Difficulty 8

Exam Cost **\$760**

Certifications in Infrastructure vs Development – Certifications carry more currency on the infrastructure side of IT compared to the software development side. This author spent years as a software developer and participated in thousands of hiring decisions, for myself and for clients. It is rare to see a software development candidate get turned down because they lacked a certification. It is common to see an infrastructure candidate ONLY be considered if they have a specific certification. It is a funny world.

> Life doesn't get easier or more forgiving, we get stronger and more resilient. - Steve Maraboli



ONLINE COURSES



There are hundreds of online sites to take technical courses. In each site, there are thousands of topics to choose from You can get lost browsing through them. It can be overwhelming the first few times you start browsing. We are going to offer commentary on three:

- Udemy
- Udacity
- Coursera

Udemy works on a pay-per-course model. Course range from \$19.99 to \$199. They allow many people to contribute. This is why they have over 100,000 courses to choose from. If you want to do deeper dive into a specific topic. Udemy is a good way to go.

Udacity is more like a trade school. While they have many individual courses, they focus on 'nano-degrees'. Nano-degrees are a series of related courses designed to cover a topic such as 'Predictive Analytics for Business' or 'Data Structures and Algorithms'. They range from 2 – 6 months in duration. The cost range is several hundred to a few thousand.



Coursera - While you can get a nano-degree from Udacity, you can get an actual university degree at Coursera. Universities such as the University of Michigan and Arizona State offer certain degree programs. You are not going to see the entire university programs offered, just a select few. There are many more universities. The list is consistently growing.

Coursera offers a series of certification programs. This is their version of the nano-degree. Most notably, they have partnered with Google to offer Google-specific training. Google Managing directors can be seen talking on LinkedIn about the talent shortage and how they expect the Coursera courses to help Google.

Online programs are going to be a factor moving forward. There is a skill gap. Online programs are well-suited to help fill it. There is a reason Coursera is about to have a stock offering in 2021.

The best way to investigate these programs is to start with the free courses. There are plenty to choose from. Find an area of interest and move from there.





UNIVERSITY EXTENSIONS

A common thing to see is a 4-year University offering continuing education. These programs fall under a variety of names. University Extensions is a common phrase. We are seeing an increasing number of universities offering IT certifications such as 'Full-stack Developer' or "Business Intelligence Analyst".

A common protocol is for the university to offer the courses in a 12 or 24-week program. One full-time and the other part-time. The tuition ranges from \$10K - \$20K. It is not unusual to see a graduate from the same university with a sociology degree attend one of these certifications.

There are many prestigious universities offering these programs. A quick search reveals quite the collection of college names:

- Georgia Tech
- Rice
- University Texas
- Rutgers
- UCI Irvine
- University Washington
- Butler

- Texas Tech
- University Utah
- UC Berkeley
- UCLA
- University Wisconsin
- University of Miami
- University of Minnesota

- Johns Hopkins
- University of Oregon
- University of North Carolina
- Kansas State
- **USC**
- Michigan State
- University of Connecticut



Some of these programs partner with local bootcamps or other established programs. It may or may not be a curriculum created by the university computer science professors. If it is a third-party curriculum, you can probably get the same training for less, but you sacrifice the name.

Having a college name on your LinkedIn profile or resume never hurts. Someone without an eye for scrutiny could easily assume you have a 4-year degree. If it gets your resume noticed and secures an interview, it is all good.

Employers are more likely to hire from a university extension program than other types of training. That is why these programs are more expensive than other online training or in-person training.





YOUR RESUME



We have worked with thousands of IT and Software people on their esumes. Here are some great tips we have candidates use on their resume to get interviewed and hired:

Throw away the idea about a one-page resume. You are not applying for a job at Sears. IT and Software people rarely have a one-page resume. It is expected to be longer.

Resume Reals Estate - The Top half of the first page is most important. Put what matters most there. The bottom half of the first page is second most important.

Skills Matter - For a tech resume, skills matter. Include them early and often. Mention the most relevant skills first.

Rethink the Resume Objective. If you have no experience and want to break into IT, you need an objective. It needs to be short and clear. Something like "I want to get work in IT and am willing to provide the first company to hire me incredible value." If you are experienced, you may want to leave off the objective and focus on the skills you have. The skills



speak to the objective. Use the objective when the experience you have does not equal the job you want.

Have Multiple Resumes – This is more applicable to someone with more experience. Many people are uncertain if they want to continue on a management track or stay technical. Have one version that emphasizes the management experience and another the focuses on the technology.

The Exception About Education – If you went to Carnegie Mellon, University of Texas or Johns Hopkins, that is more important than skills. Put that first. – If you went to Carnegie Mellon, University of Texas or Johns Hopkins, you are probably not reading this book. You got a job at campus recruitment.

Non-Technical Jobs - Don't put too much effort into non-IT roles. If you were an assistant manager at a car rental place, the IT hiring person has a good idea what that job entails. You are not going to get hired into an IT role from your work leasing cars. Let people know what you have done, but don't bore then about things that do not matter to them.

Tell a Story – The goal of a resume is not to tell them about you. The goal is to tell them how you can help them. It is a slight difference. People all the time see a resume and zone in on an unexpected thing. You want a hiring manager to say, "this person can help us".

Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

- Steve Jobs

Have a Skills Section – List what you have learned or worked on. Break out the skills by category.

Skills matter more than Education - If you are trying to break into IT and lack experience, the certifications may make it to page one. If you have two years' experience, those certifications may need to be at the bottom of page 2.

Here are some sample ways of listing your skills

TECHNICAL SKILLS

- Operating Systems: Windows XP/7/10, Mac OS, Linux, Windows Server: Windows Server 2008, 2012, 2016, Active Directory Network Technologies: Cisco, OSI TCP/IP Models, Network Mapping, Traffic Analysis, LAN/WAN, Wireless, SNMP, DNS, DHCP, FTP, SSH, LDAP, Load Balancing, Security: Cryptography, Umbrella, Malware Analysis, VPN, Palo Alto Firewalls, Backup/Recovery Plan, SCADA, IPS/IDS, Encryption tools, SIEM Solution, Network
- Sniffer, Tripwire, RCA, Burp Suite, SolarWinds Hardware: Computers, Laptops, iPad, Printers, Faxes, VolP, Mobil Devices,
- Android, Switches, Routers, Hubs, Projectors, Smartboard, Peripheral, Software/Applications/Tools: Data loss Prevention (DLP), VMware, Wireshark, McAfee, Remote Desktop, Nessus Professional from Rapid7, OpenVAS, Metasploit, GNS3, Packet Tracer

.Net Technologies:	.NET Core, C#.NET, ASP.Net, Entity Framework, WEB API, Restful Services, Web API WCF, ADO.NET, VB.NET
Other Languages:	C/C++, Java, Objective-C
	Crystal Benorts SSRS
Reporting Tools:	Crystan reports, son use ACD NET Core Angular Beact.
Web Technologies:	Node.js, HTML5, CSS3, ASP.NET, ASP.NET Core, Angular, neuco JavaScript, jQuery, Bootstrap, Web Services, XML, XSL, XSLT, IIS,
Cloud Technologies:	Azure, AWS
Developer Tools:	Microsoft Visual Studio, TFS, Xamarin, Eclipse and Net Bears
Databases:	Microsoft SQL Server, Cosmos DB, MongoDB
	VSTS, Azure DevOps, Visual Source Safe, Jira, Git and SVN.
Collaboration rools.	vsrs, real cirre on Strong understanding of
Security:	various cryptosystems (Symmetric and Asymmetric)
Other Tools:	SyncFusion, Janus and Telerik Controls



YOUR LINKEDIN PROFILE



There is one major goal with your LinkedIn account – to be found by more companies looking to hire. LinkedIn Recruiter is a major tool used by technical recruiters. Many claim it is their go-to tool. It allows them to see active and passive candidates. There are many things you can do to show up higher in LinkedIn recruiter searches. The more searches you show up in, the higher the odds you talk to people who will hire you. Here are some tips to help you show up on more searches and to be higher on the lists:

- The content in your LinkedIn Profile should be longer than the resume. Be verbose. Go into details about your project. You never know what keywords recruiters will search on.
- Mention skills in the description, skills section, education and in any work experience. The more you mention them, the more likely you ae to be found.
- Connect to recruiters. Connect to LinkedIn Open Networkers (LION). Get to the magical 500 connections. This helps you show on in search results.
- Be active on LinkedIn. Share post. Like articles. Comment on topics. You are more likely to be found if you are active.
- Connect to people at companies you may want to work for.
- Join groups. Connect to people in the groups.
- Have a full profile and be verbose. Include a picture.

GETTING YOUR FIRST EXPERIENCE



So, you have some training and some skills, but little or no experience. Employers want experience. There is a simple way to add some experience. Accept some gig work online. There are multiple places to advertise yourself and meet prospects. A few include:

- Workhoppers
- Fiverr
- Upwork
- Freelancer

These sites are for freelance gig work. Some of it is for a few hours, others can extend to thousands of hours. The goal is not to make a living off of online-freelance gigs. It is to use online-freelance gigs to add some experience to get hired.

The bulk of people offering services on the freelance site are not in the US. The skills, communication and training are iffy. Anyone who has consumed these services knows you may have to go through 3-5 people to find one that can actually help you. Even when you find someone who can help you, it is more effort than the buyer expected.

Many consumers of freelancers would welcome someone in the US. Many US freelancers charge much more then their overseas counterparts. If the consumers have the option of using a US-based freelancer trying to gain experience vs an overseas person with questionable communication skills, they will go with the US-based. If getting experience is the goal for the freelance work, you do not want to price yourself out of a job. Think of freelancing as a continuation of any training you have paid for. You need to add experience lines to your resume and LinkedIn profile. Think of this as a doctor in residency. They work all the time for little pay. Doctors are willing to go through residency to get to the other side. Residency is just part of the education process. A difficult part that requires lots of hours and little pay, but still part of the education.



NATIONWIDE WE HAVE USED DATA IN OVER

200+ Different Job Titles

AND HAVE CREATED THESE NATIONAL AVERAGES.

		VATIONWID	E		TEXAS	
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
AGILE / DEVOPS						
AGILE COACH	\$111,482	\$132,369	\$187,718	\$119,286	\$141,634	\$200,858
DEVOPS ARCHITECT	\$136,008	\$161,490	\$229,015	\$145,529	\$172,794	\$245,046
DEVOPS ENGINEER	\$123,767	\$146,956	\$208,404	\$132,431	\$157,243	\$222,992
PRODUCT OWNER	\$101,489	\$120,503	\$170,891	\$108,594	\$128,939	\$182,853
SCRUM MASTER	\$97,905	\$115,921	\$163,959	\$104,759	\$124,034	\$175,436
ANALYSTS						
BUSINESS ANALYST	\$80,283	\$95,055	\$134,447	\$85,903	\$101,708	\$143,857
BUSINESS SYSTEMS ANALYST	\$80,413	\$95,555	\$135,762	\$86,042	\$102,244	\$145,265
QUALITY ASSURANCE ANALYST	\$67,547	\$80,267	\$114,040	\$72,276	\$85,885	\$122,023
SERVICENOW BUSINESS ANALYST	\$60,792	\$72,239	\$102,636	\$65,048	\$77,296	\$109,820
SYSTEMS ANALYST	\$81,458	\$96,339	\$136,023	\$87,160	\$103,083	\$145,545
TECHNICAL BUSINESS ANALYST	\$83,087	\$98,266	\$138,744	\$88,903	\$105,144	\$148,456
CLOUD						
AWS/DEVOPS ENGINEER	\$122,708	\$145,683	\$206,254	\$131,298	\$155,881	\$220,692
CLOUD ARCHITECT	\$127,617	\$151,511	\$214,504	\$136,550	\$162,117	\$229,519
CLOUD COMPUTING ANALYST	\$79,107	\$97,905	\$164,481	\$84,645	\$104,759	\$175,995
CLOUD DEVOPS ENGINEER	\$82,272	\$101,821	\$171,060	\$88,031	\$108,950	\$183,034
CLOUD ENGINEER	\$85,562	\$105,894	\$177,902	\$91,552	\$113,308	\$190,356
CLOUD SOLUTIONS ARCHITECT	\$127,617	\$151,511	\$214,504	\$136,550	\$162,117	\$229,519

		VATIONWID	E		TEXAS	
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
CONSULTING AND SYSTEMS INTEGRATION	DN					
DIRECTOR	\$122,708	\$145,683	\$206,254	\$131,298	\$155,881	\$220,692
IT AUDITOR	\$95,817	\$114,092	\$161,871	\$102,524	\$122,079	\$173,202
PROJECT MANAGER/SENIOR CONSULTANT	\$101,300	\$120,098	\$170,224	\$108,390	\$128,504	\$182,140
SENIOR IT AUDITOR	\$111,482	\$132,369	\$187,718	\$119,286	\$141,634	\$200,858
STAFF CONSULTANT	\$64,226	\$79,629	\$133,674	\$68,721	\$85,205	\$143,030
CX, UI AND UX						
CMS ADMINISTRATOR / DEVELOPER	\$71,536	\$84,851	\$119,835	\$76,544	\$90,791	\$128,225
CX DESIGNER	\$91,117	\$105,216	\$142,812	\$97,496	\$112,581	\$152,808
CX LEAD	\$81,980	\$92,684	\$144,639	\$87,719	\$99,171	\$154,763
E-COMMERCE DEVELOPER	\$76,496	\$92,423	\$113,831	\$81,851	\$98,892	\$121,800
FRONT END DEVELOPER	\$66,315	\$77,020	\$128,974	\$70,957	\$82,410	\$138,002
SENIOR E-COMMERCE DEVELOPER	\$86,940	\$102,865	\$145,160	\$93,026	\$110,067	\$155,323
SENIOR FRONT END DEVELOPER	\$86,679	\$102,865	\$145,683	\$92,746	\$110,067	\$155,881
SENIOR UX DESIGNER	\$75,453	\$89,551	\$127,146	\$80,734	\$95,820	\$136,047
SENIOR UX RESEARCHER	\$78,847	\$89,551	\$141,506	\$84,365	\$95,820	\$151,411
SENIOR WEB DEVELOPER	\$104,171	\$123,492	\$174,402	\$111,464	\$132,136	\$186,610
UI DEVELOPER	\$66,315	\$77,020	\$128,974	\$70,957	\$82,410	\$138,002
UX DESIGNER	\$65,010	\$79,107	\$106,260	\$69,560	\$84,645	\$113,699
UX LEAD	\$66,315	\$77,020	\$128,974	\$70,957	\$82,410	\$138,002
UX RESEARCHER	\$87,984	\$102,082	\$139,679	\$94,143	\$109,228	\$149,456
WEB DESIGNER	\$91,117	\$105,216	\$142,812	\$97,496	\$112,581	\$152,808
WEB DEVELOPER	\$66,315	\$77,020	\$128,974	\$70,957	\$82,410	\$138,002

		NATIONWID	E		TEXAS	
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
DATA / DATABASE ADMINISTRATION						
BUSINESS INTELLIGENCE ANALYST	\$88,768	\$109,915	\$184,845	\$94,981	\$117,609	\$197,784
DATA ANALYST/REPORT WRITER	\$83,546	\$99,211	\$140,984	\$89,395	\$106,156	\$150,853
DATA REPORTING ANALYST	\$60,832	\$76,496	\$113,048	\$65,090	\$81,852	\$120,962
DATA WAREHOUSE ANALYST	\$79,629	\$98,688	\$166,047	\$85,205	\$105,598	\$177,671
DATABASE ADMINISTRATOR	\$80,153	\$100,255	\$163,959	\$85,762	\$107,272	\$175,436
DATABASE DEVELOPER	\$102,605	\$121,665	\$172,314	\$109,788	\$130,181	\$184,374
DATA SCIENCE						
BIG DATA DEVELOPER	\$102,605	\$121,665	\$172,314	\$109,788	\$130,181	\$184,374
BIG DATA ENGINEER	\$132,890	\$157,693	\$222,963	\$142,193	\$168,732	\$238,570
BUSINESS INTELLIGENCE DEVELOPER	\$102,605	\$121,665	\$172,314	\$109,788	\$130,181	\$184,374
DATA ANALYST	\$79,629	\$98,688	\$166,047	\$85,205	\$105,598	\$177,671
DATA ARCHITECT	\$114,615	\$135,502	\$191,895	\$122,638	\$144,988	\$205,327
DATA MANAGER	\$115,761	\$136,857	\$193,814	\$123,864	\$146,438	\$207,380
DATA SCIENTIST	\$104,954	\$124,797	\$175,968	\$112,302	\$133,532	\$188,286
DATA SPECIALIST	\$79,629	\$98,688	\$166,047	\$85,205	\$105,598	\$177,671
DATABASE ENGINEER	\$132,890	\$157,693	\$222,963	\$142,193	\$168,732	\$238,570
HADOOP DEVELOPER	\$133,554	\$158,482	\$224,078	\$142,904	\$169,575	\$239,763
MACHINE LEARNING ENGINEER	\$140,231	\$166,406	\$235,282	\$150,049	\$178,054	\$251,751
MASTER DATA ANALYST	\$112,186	\$133,125	\$188,225	\$120,040	\$142,443	\$201,401
NOSQL DEVELOPER	\$113,048	\$133,935	\$189,284	\$120,962	\$143,311	\$202,534
SENIOR DATA ANALYST	\$99,483	\$117,863	\$166,570	\$106,446	\$126,114	\$178,231
SENIOR DATA SCIENTIST	\$115,761	\$136,857	\$193,814	\$123,864	\$146,438	\$207,380
DATABASE ADMINISTRATION						
ORACLE DBA	\$104,954	\$124,797	\$175,968	\$112,302	\$133,532	\$188,286
SQL SERVER DBA	\$94,459	\$112,317	\$158,371	\$101,072	\$120,179	\$169,458

		NATIONWID	E		TEXAS	
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
DIGITAL AND GRAPHIC DESIGN						
ART DIRECTOR	\$44,384	\$55,088	\$83,285	\$47,490	\$58,945	\$89,115
CREATIVE DIRECTOR	\$97,905	\$115,921	\$163,959	\$104,759	\$124,034	\$175,436
DESIGN DIRECTOR	\$81,458	\$96,339	\$136,023	\$87,160	\$103,083	\$145,545
DIGITAL DESIGNER	\$44,384	\$55,088	\$83,285	\$47,490	\$58,945	\$89,115
GRAPHIC DESIGNER	\$42,295	\$53,000	\$81,196	\$45,256	\$56,709	\$86,880
SENIOR ART DIRECTOR	\$56,916	\$67,620	\$95,817	\$60,900	\$72,353	\$102,524
SENIOR DIGITAL DESIGNER	\$56,916	\$67,620	\$95,817	\$60,900	\$72,353	\$102,524
SENIOR GRAPHIC DESIGNER	\$49,605	\$60,309	\$88,506	\$53,078	\$64,531	\$94,702
TRAFFIC MANAGER	\$49,605	\$60,309	\$88,506	\$53,078	\$64,531	\$94,702
DIRECTOR / MANAGEMENT						
CHIEF INFORMATION OFFICER (CIO)	\$178,580	\$211,998	\$300,243	\$191,080	\$226,837	\$321,260
CHIEF SECURITY OFFICER	\$150,905	\$178,841	\$252,988	\$161,468	\$191,360	\$270,697
CHIEF TECHNOLOGY OFFICER (CTO)	\$152,471	\$183,801	\$260,037	\$163,144	\$196,667	\$278,239
DIRECTOR OF IT	\$123,492	\$146,727	\$208,081	\$132,136	\$156,998	\$222,647
DIRECTOR OF SOFTWARE ENGINEERING	\$117,318	\$139,390	\$197,677	\$125,530	\$149,149	\$211,515
DIRECTOR OF TECHNOLOGY	\$123,492	\$146,727	\$208,081	\$132,136	\$156,998	\$222,647
VICE PRESIDENT - IT	\$142,812	\$169,964	\$240,978	\$152,809	\$181,862	\$257,846
VP OF ENGINEERING	\$141,384	\$168,264	\$238,568	\$151,281	\$180,043	\$255,267
ENTERPRISE RESOURCE PLANNING						
ERP BUSINESS ANALYST	\$87,724	\$103,911	\$146,989	\$93,863	\$111,184	\$157,278
ERP TECHNICAL DEVELOPER	\$99,733	\$118,269	\$167,091	\$106,714	\$126,548	\$178,788
ERP TECHNICAL/FUNCTIONAL ANALYST	\$95,034	\$112,788	\$159,781	\$101,686	\$120,682	\$170,967
MID-TIER ERP BUSINESS ANALYST	\$84,591	\$100,255	\$141,767	\$90,511	\$107,272	\$151,691
MID-TIER ERP DEVELOPER	\$94,511	\$112,004	\$158,215	\$101,127	\$119,844	\$169,290

		NATIONWID	E	TEXAS		
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
INBOUND AND DIGITAL MARKETING						
BRAND MANAGER	\$65,270	\$77,280	\$109,132	\$69,839	\$82,690	\$116,771
CAMPAIGN MANAGER	\$60,309	\$71,797	\$101,821	\$64,531	\$76,823	\$108,949
CRM MARKETING MANAGER	\$84,067	\$99,733	\$141,245	\$89,953	\$106,714	\$151,131
DIGITAL MARKETING MANAGER	\$84,067	\$99,733	\$141,245	\$89,953	\$106,714	\$151,131
DIGITAL MARKETING SPECIALIST	\$56,916	\$67,620	\$95,817	\$60,900	\$72,353	\$102,524
ECOMMERCE DIRECTOR	\$97,383	\$115,398	\$163,437	\$104,201	\$123,477	\$174,876
ECOMMERCE MANAGER	\$84,067	\$99,733	\$141,245	\$89,953	\$106,714	\$151,131
EMAIL MARKETING SPECIALIST	\$52,216	\$62,920	\$91,117	\$55,871	\$67,325	\$97,496
HEAD OF MARKETING	\$102,605	\$121,402	\$171,530	\$109,787	\$129,901	\$183,537
MARKETING DIRECTOR	\$120,098	\$142,812	\$202,599	\$128,504	\$152,808	\$216,781
MARKETING MANAGER	\$84,067	\$99,733	\$141,245	\$89,953	\$106,714	\$151,131
PAID SEARCH SPECIALIST	\$54,566	\$65,270	\$93,467	\$58,385	\$69,839	\$100,009
SEO/OPTIMIZATION MANAGER	\$62,920	\$74,669	\$105,998	\$67,325	\$79,896	\$113,419
INFRASTRUCTURE						
HELPDESK	\$34,984	\$41,512	\$59,005	\$37,435	\$44,418	\$63,135
NETWORK ADMINISTRATOR	\$76,236	\$90,595	\$128,452	\$81,572	\$96,937	\$137,444
NETWORK ARCHITECT	\$119,053	\$141,245	\$199,728	\$127,386	\$151,132	\$213,708
NETWORK ENGINEER	\$95,034	\$112,788	\$159,520	\$101,686	\$120,682	\$170,687
NETWORK MANAGER	\$98,167	\$116,442	\$164,742	\$105,038	\$124,593	\$176,274
NOC ENGINEER	\$54,566	\$62,659	\$101,821	\$58,386	\$67,046	\$108,949
SAN ADMIN	\$55,112	\$63,286	\$102,839	\$58,970	\$67,716	\$110,038
SENIOR NETWORK ENGINEER	\$106,782	\$127,669	\$183,018	\$114,257	\$136,606	\$195,829
SYSTEM ADMINISTRATOR	\$54,566	\$62,659	\$101,821	\$58,386	\$67,046	\$108,949
TELECOMMUNICATIONS ENGINEER	\$62,137	\$73,625	\$104,171	\$66,486	\$78,779	\$111,464
TELECOMMUNICATIONS MANAGER	\$81,980	\$97,644	\$138,373	\$87,719	\$104,479	\$148,059
WIRELESS NETWORK ENGINEER	\$105,738	\$125,579	\$177,535	\$113,139	\$134,371	\$189,963

		NATIONWID	E		TEXAS	
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
MOBILE						
ANDROID DEVELOPER	\$123,231	\$146,466	\$207,820	\$131,857	\$156,720	\$222,368
IOS DEVELOPER	\$124,274	\$147,511	\$208,865	\$132,974	\$157,836	\$223,486
MOBILE ENGINEER	\$125,517	\$148,986	\$210,954	\$134,304	\$159,414	\$225,721
PROGRAMMING						
API BACK END DEVELOPER .NET	\$116,181	\$138,112	\$195,549	\$124,313	\$147,780	\$209,238
API BACK END DEVELOPER JAVA	\$117,226	\$139,156	\$196,594	\$125,431	\$148,897	\$210,355
APPLICATIONS ARCHITECT	\$115,659	\$137,589	\$195,028	\$123,754	\$147,222	\$208,680
DEVELOPER/PROGRAMMER ANALYST	\$90,334	\$107,304	\$152,210	\$96,658	\$114,816	\$162,865
FULL-STACK DEVELOPER .NET	\$105,738	\$126,625	\$181,974	\$113,139	\$135,487	\$194,712
FULL-STACK DEVELOPER JAVA	\$106,782	\$127,669	\$183,018	\$114,257	\$136,606	\$195,829
PYTHON DEVELOPER	\$105,715	\$126,392	\$181,188	\$113,115	\$135,239	\$193,871
SENIOR API BACK END DEVELOPER JAVA	\$117,226	\$139,156	\$196,594	\$125,431	\$148,897	\$210,355
SENIOR FULL-STACK DEVELOPER .NET	\$116,181	\$138,112	\$195,549	\$124,313	\$147,780	\$209,238
SENIOR SOFTWARE DEVELOPER	\$115,020	\$136,732	\$193,594	\$123,070	\$146,303	\$207,145
SENIOR SOFTWARE ENGINEER	\$117,320	\$139,466	\$197,465	\$125,531	\$149,229	\$211,288
SOFTWARE DEVELOPER	\$99,722	\$118,546	\$167,846	\$106,701	\$126,844	\$179,595
SOFTWARE ENGINEER	\$101,716	\$120,917	\$171,203	\$108,836	\$129,381	\$183,187
PROJECT MANAGEMENT / TEAM LEADS						
INFORMATION TECHNOLOGY MANAGER	\$110,437	\$131,063	\$185,367	\$118,168	\$140,237	\$198,344
IT APPLICATIONS MANAGER	\$112,646	\$133,684	\$189,075	\$120,531	\$143,042	\$202,311
IT AUDIT MANAGER	\$113,772	\$135,021	\$190,966	\$121,736	\$144,472	\$204,334
MANAGER	\$110,437	\$131,063	\$185,367	\$118,168	\$140,237	\$198,344
PROJECT MANAGER / SCRUM MASTER	\$97,905	\$115,921	\$163,959	\$104,759	\$124,034	\$175,436
SOFTWARE DEVELOPMENT MANAGER	\$102,801	\$121,717	\$172,158	\$109,997	\$130,235	\$184,208
TECHNICAL LEAD	\$81,458	\$96,339	\$136,023	\$87,160	\$103,083	\$145,545
TECHNICAL WRITER	\$56,916	\$67,620	\$95,817	\$60,900	\$72,353	\$102,524

	NATIONWIDE		E			
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
QUALITY ASSURANCE (QA) AND TESTIN	G					
AUTOMATION TEST LEAD	\$71,536	\$85,113	\$120,619	\$76,544	\$91,070	\$129,063
QA ARCHITECT	\$72,251	\$85,964	\$121,825	\$77,309	\$91,981	\$130,354
QA ENGINEER	\$60,309	\$71,797	\$101,821	\$64,531	\$76,823	\$108,949
QA ENGINEER AUTOMATED TOOLS	\$65,270	\$77,280	\$109,132	\$69,839	\$82,690	\$116,771
QA/TESTING MANAGER	\$84,067	\$99,733	\$141,245	\$89,953	\$106,714	\$151,131
QUALITY ASSURANCE AUTOMATION ENGINEER	\$71,536	\$85,113	\$120,619	\$76,544	\$91,070	\$129,063
QUALITY ASSURANCE ENGINEER	\$65,270	\$77,280	\$109,132	\$69,839	\$82,690	\$116,771
QUALITY ASSURANCE SPECIALIST	\$64,618	\$76,508	\$108,040	\$69,142	\$81,863	\$115,604
SDET	\$78,187	\$92,574	\$130,728	\$83,660	\$99,054	\$139,880
SOFTWARE QUALITY ASSURANCE ENGINEER	\$66,459	\$78,688	\$111,119	\$71,112	\$84,196	\$118,898
SOFTWARE TEST ENGINEER	\$65,794	\$77,901	\$110,008	\$70,400	\$83,354	\$117,709
TEST ENGINEER	\$66,453	\$78,680	\$111,108	\$71,104	\$84,188	\$118,886
SECURITY						
CISSP	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
CYBER SECURITY ANALYST	\$92,266	\$109,380	\$154,768	\$98,724	\$117,037	\$165,603
CYBER SECURITY ENGINEER	\$97,801	\$115,943	\$164,054	\$104,648	\$124,059	\$175,539
DATA SECURITY ANALYST	\$107,827	\$127,669	\$180,407	\$115,374	\$136,606	\$193,036
INFORMATION SECURITY ANALYST	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
INFORMATION SYSTEMS SECURITY MANAGER	\$120,098	\$142,812	\$202,599	\$128,504	\$152,809	\$216,781
IT SECURITY ANALYST	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
NETWORK SECURITY ENGINEER	\$102,605	\$121,402	\$171,530	\$109,788	\$129,901	\$183,538
SOC ENGINEER	\$103,631	\$122,616	\$173,245	\$110,886	\$131,200	\$185,373
SYSTEMS SECURITY ADMINISTRATOR	\$97,383	\$115,398	\$163,437	\$104,201	\$123,477	\$174,876
SOCIAL MEDIA AND CONTENT						
AEM DEVELOPER	\$98,357	\$116,552	\$165,071	\$105,243	\$124,712	\$176,625
CONTENT DIRECTOR	\$62,920	\$74,669	\$105,998	\$67,325	\$79,896	\$113,419

		VATIONWID	E	TEXAS			
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH	
CONTENT MARKETING MANAGER	\$71,536	\$85,113	\$120,619	\$76,544	\$91,070	\$129,063	
CONTENT PRODUCER	\$56,916	\$67,620	\$95,817	\$60,900	\$72,353	\$102,524	
COPYWRITER	\$52,216	\$62,920	\$91,117	\$55,871	\$67,325	\$97,496	
HEAD OF SOCIAL	\$84,067	\$99,733	\$141,245	\$89,953	\$106,714	\$151,131	
SENIOR COPYWRITER	\$54,566	\$65,270	\$93,467	\$58,385	\$69,839	\$100,009	
SOCIAL MEDIA MANAGER	\$65,270	\$77,280	\$109,132	\$69,839	\$82,690	\$116,771	
SOLUTIONS							
ENTERPRISE ARCHITECT	\$120,098	\$142,812	\$202,599	\$128,504	\$152,809	\$216,781	
IMPLEMENTATION SPECIALIST	\$120,098	\$142,812	\$202,599	\$128,504	\$152,809	\$216,781	
PRINCIPAL ARCHITECT	\$127,617	\$151,511	\$214,504	\$136,550	\$162,117	\$229,519	
SENIOR SOFTWARE CONSULTANT	\$99,541	\$118,179	\$167,313	\$106,509	\$126,451	\$179,026	
SOFTWARE ARCHITECT	\$119,449	\$141,814	\$200,776	\$127,810	\$151,741	\$214,830	
SOLUTION ARCHITECT	\$127,617	\$151,511	\$214,504	\$136,550	\$162,117	\$229,519	
SYSTEM ARCHITECT	\$116,131	\$137,875	\$195,199	\$124,260	\$147,527	\$208,863	
TECHNICAL ARCHITECT	\$127,617	\$151,511	\$214,504	\$136,550	\$162,117	\$229,519	
TECHNOLOGY ANALYST	\$99,541	\$118,179	\$167,313	\$106,509	\$126,451	\$179,026	
TECHNOLOGY LEAD	\$109,495	\$129,996	\$184,044	\$117,160	\$139,096	\$196,928	
TECHNICAL SUPPORT							
CABLE/WIRING TECHNICIAN	\$34,202	\$42,818	\$57,439	\$36,596	\$45,815	\$61,459	
DESKTOP SUPPORT ANALYST	\$54,043	\$63,965	\$90,073	\$57,827	\$68,443	\$96,378	
HARDWARE ANALYST	\$62,920	\$74,669	\$105,998	\$67,325	\$79,896	\$113,419	
HELP DESK TIER 1	\$34,724	\$40,989	\$57,699	\$37,155	\$43,859	\$61,738	
HELP DESK TIER 2	\$40,728	\$48,039	\$67,620	\$43,579	\$51,402	\$72,353	
HELP DESK TIER 3	\$51,172	\$60,571	\$85,634	\$54,754	\$64,811	\$91,628	
IT SUPPORT SPECIALIST	\$55,265	\$65,417	\$92,485	\$59,134	\$69,996	\$98,959	
MANAGER	\$85,373	\$101,300	\$143,073	\$91,349	\$108,390	\$153,088	
PC TECHNICIAN	\$34,724	\$40,989	\$57,699	\$37,155	\$43,859	\$61,738	
PRODUCT SUPPORT SPECIALIST	\$48,822	\$57,960	\$82,240	\$52,240	\$62,017	\$87,997	
SYSTEMS ENGINEER	\$88,245	\$104,954	\$149,077	\$94,423	\$112,302	\$159,512	

	NATIONWIDE			TEXAS		
	LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
THIRD PARTY						
EMR CONSULTANT	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
EPIC CONSULTANT	\$104,892	\$124,348	\$175,947	\$112,234	\$133,052	\$188,264
EPIC CREDENTIALED TRAINER	\$92,304	\$109,426	\$154,833	\$98,767	\$117,086	\$165,672
GIS ANALYST	\$88,245	\$104,954	\$149,077	\$94,423	\$112,302	\$159,512
GIS DEVELOPER	\$95,305	\$113,350	\$161,003	\$101,977	\$121,286	\$172,274
GIS SPECIALIST	\$89,586	\$106,550	\$151,343	\$95,858	\$114,009	\$161,937
MULESOFT DEVELOPER	\$88,245	\$104,954	\$149,077	\$94,423	\$112,302	\$159,512
SALESFORCE ADMINISTRATOR	\$82,950	\$98,657	\$140,132	\$88,758	\$105,564	\$149,942
SALESFORCE ARCHITECT	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
SALESFORCE CONSULTANT	\$104,892	\$124,348	\$175,947	\$112,234	\$133,052	\$188,264
SALESFORCE DEVELOPER	\$92,304	\$109,426	\$154,833	\$98,767	\$117,086	\$165,672
SCADA ANALYST	\$86,766	\$102,860	\$145,543	\$92,840	\$110,061	\$155,732
SCADA ENGINEER	\$89,369	\$105,946	\$149,910	\$95,626	\$113,362	\$160,404
SCADA SPECIALIST	\$88,475	\$104,886	\$148,410	\$94,669	\$112,229	\$158,800
SERVICENOW ARCHITECT	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
SERVICENOW DEVELOPER	\$85,467	\$101,320	\$143,364	\$91,450	\$108,413	\$153,401
SHAREPOINT ADMINISTRATOR	\$86,322	\$102,334	\$144,798	\$92,365	\$109,497	\$154,935
SHAREPOINT ARCHITECT	\$97,122	\$115,137	\$162,914	\$103,921	\$123,197	\$174,319
SHAREPOINT CONSULTANT	\$104,892	\$124,348	\$175,947	\$112,234	\$133,052	\$188,264
SHAREPOINT DEVELOPER	\$92,304	\$109,426	\$154,833	\$98,767	\$117,086	\$165,672





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