Dear CSE Students:

Welcome to the first newsletter of 2018.

Message from the UG Advisor: Welcome new CSE students and welcome back to our continuing students. With the start of the spring term, CSE launches our newest undergraduate degree program—the Bachelor of Science in Cybersecurity. A number of our continuing CSE students have transitioned over to that new degree program. In support of Cybersecurity and our existing programs, we are pleased to announce that a new advisor has joined the department to assist the CSE undergraduate programs. Please join us in welcoming Rose Marie Ackerman to the department. Spring is a busy time with the Career Fair starting at the end of January, Engineering Expo in February and Spring Break in mid-March. Now is the time to prepare for summer internships. To find internship opportunities, access your account in Handshake by logging into MyUSF. Under the My Resources tab, choose the option to “Find A Job (Handshake).” This will log you into Handshake automatically. Now that spring registration is over, it is not too early to start thinking about your summer and fall registration. Rose Marie and I are happy to meet with you for advising. Have a great semester.

Message from the Grad Program Assistant: To all graduate students who have been appointed as a TA/RA, please make sure you pay the remaining balance on your accounts once your Tuition Waiver has been applied. The deadline to pay your fees is March 2 by 5PM. Please visit the Electronic Thesis and Dissertation website if you will be defending your Thesis/Dissertation this semester. Pay close attention to all of the deadlines. For assistance with your Thesis/Dissertation, please click here. If you are graduating Spring 2018, your Graduation Checklist is due February 2. Please see me in ENB 342D if you need help filling out the form.

Attached are announcements for the following (please note that this listing does not imply University or Department endorsement):

- USF I-Corps Program
- PHP/.Net Developer at JL Marine
- Web design intern for girl talk 1 on 1
- Corestream programming/development internships
- 18 certifications worth having (posted on request of the Chair)

Regards,

Ken Christensen
Professor and Associate Chair of UG Affairs
GET YOUR RESEARCH OUT INTO THE WORLD

USF Faculty & Students
If You’ve Got a Great Idea for a Product, Technology or Service

The USF I-Corps Program Can Help You Take It to the Next Level

• Take advantage of this opportunity to participate in a National Science Foundation program – here at USF.
• Get the tools and techniques to develop your ideas into potential products or companies.
• Become eligible for a $50,000 NSF grant.

Sign up now for this 6 week workshop
Tuesdays, 9am – 12pm
February 6, 13, 27, March 6, 20, 27 in 2018
USF Research Park

For More Information
http://innovation.usf.edu/icorps

For Reasonable Accommodations
Please contact Victoria Stuart | 813-974-0466
PHP/.Net Developer

Department: IT
Reports To: IT Manager
Employees Supervised: None

Location: 9010 Palm River Road
Tampa, FL 33619
Status: Full-time
FLSA Status: Exempt

Our mission is to share a sense of adventure with the world through our high performance marine products while instilling and inspiring consumer confidence with superior service.

Position Overview:

This employee will work alongside IT and Electrical Engineering to create desktop/web tools for production, database structures and other tools to help unify the website and apps for future and current product lines.

Company Values:

- **Exceptional Client Service** – Our customers are our life blood, we treat them as the essential partners that they are by going the extra mile and putting customer needs first
- **Innovation and Growth** – Always looking to acquire new information and try new things to improve how we work
- **Ethical Orientation** – Earns the trust and confidence of coworkers and customers through honest communication, ethical behavior and professionalism in all interactions
- **Driven & Passionate** – Shows passion for improving the delivery of services with a commitment to continuous improvement

Key Responsibilities:

- Translate application storyboards and use cases into functional applications
- Design, build, and maintain efficient, reusable, and reliable code
- Integrate data storage solutions Ensure the best possible performance, quality, and responsiveness of applications
- Identify bottlenecks and bugs, and devise solutions to mitigate and address these issues
- Help maintain code quality, organization, and automatization
- Develop for and Support ERP system
Knowledge, Skills and Abilities (KSAs):

- Strong knowledge of .NET web framework
- Proficient in C# and/or VB.NET, with a good knowledge of their ecosystems
- Microsoft SQL Server
- Strong understanding of object-oriented programming
- Skill for writing reusable libraries
- Familiar with various design and architectural patterns
- Knack for writing clean, readable, and easily maintainable code
- Understanding of fundamental design principles for building a scalable application
- Experience creating database schemas that represent and support business processes
- Proficient understanding of code versioning tools

Educational/Experience Requirement:

- Bachelor's degree in MIS/Computer Science
- 2+ years of .NET/C#/php development experience
- 2+ years’ experience designing and developing web applications, utilizing ASP.NET, AJAX, JavaScript, HTML/CSS, jQuery, MVC Framework
- 2+ years of object oriented design skills
- 2+ years of MySQL/SQL Server application development and very strong database design skills
- Experience designing and developing web services.
- Experience in developing windows services based or any other service based multiple threaded applications required
- Knowledge of secure coding practices and skills remediating code with vulnerabilities
- Knowledge of IT Infrastructure and OS configuration highly desired.

Computer Skills: Demonstrates use of advance computer operations, basic programming in 3rd and 4th generation languages, relational databases, and operating systems, intermediate software packages, (word processing, spreadsheets, graphics, etc) including but not limited to:

- SQL 2008+
- MySQL
- PHP
- Magneto Enterprise
- .NET (C#, VB.NET, ASP.NET)
- Adobe Creative Suite

Working Hours:
• 8:00 AM to 5:00 PM Monday through Friday, with a 1 hour lunch.

Working Conditions/Physical Demands of the Job

Office:

The work environment characteristics described here are representative of those typical in an office environment, using phones, computers, and copiers. The noise level in the work environment is usually moderate.

While performing the duties of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand; walk; use hands to finger, handle or feel; and reach with hands and arms. The employee must frequently lift and/or move up to 25 pounds. Reasonable accommodations made to enable individuals with disabilities to perform the essential functions.

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.
WEB DESIGN INTERN FOR GIRL TALK 1 ON 1

WE WANT YOU!!

Who? Girl Talk 1 on 1, Inc.

What? In search of a Web Design Intern

When? 8 weeks, start date will be late Nov/early Dec depending on availability. Compensation included.

Where? Virtual position

Qualifications: Prefer that it be a student (enrolled at least part time) getting a degree in Computer technology, Website design, Computer engineering, or any other related field. Graphic design experience (using adobe, photoshop, or any other software is bonus), computer efficiency, and ability to work on a team. Need flexible schedule for conference calls, and be able to meet deadlines. Don’t be afraid to apply if not much experience.

Preferred Experience: portfolio or samples of graphics, html coding

If interested please send resume and cover letter to girltalk1on1@gmail.com by February 9, 2017
Corestream is a Tampa-based, fast-growing, cutting-edge financial technology company that is looking for creative and motivated computer science and engineering students for programming/development internships.

Corestream is the industry leader in the delivery of Voluntary Benefits...our proprietary software is the engine for large, Fortune-500 companies to easily and cost-effectively offer unlimited Voluntary Benefits to its employees through payroll deduction. We allow these companies to build and communicate culture through benefits, from “traditional” products like Critical Illness and Hospital Indemnity, to products tailored to employees’ demands like Pet Insurance, Legal Insurance, ID Theft Protection and Employee Purchasing Programs and in many cases we customize the UX for the clients to further communicate each company’s culture.

**With all the opportunities available to a highly-motivated and talented software engineer like yourself, why would you want to work at Corestream?**

You will have the unique opportunity to gain unparalleled experience from an established FinTech company and apply the knowledge you acquired in your academic studies and your creativity to real world solutions. We are fast-paced and fun. Although we are ten years old, we still have a “start-up” culture with a casual dress code, weekly yoga, free snacks and beverages and Friday lunches are on the house. More importantly, you will have the opportunity to interact and senior management and your voice will be heard and ideas recognized.

**Who do we want?**

We want people who thrive when they are developing innovative solutions and whose mission is to make a positive impact on the lives of millions through endless possibilities in cutting-edge technology.

- a college junior, senior or graduate student working toward a degree in computer science, MIS, engineering, math or a related field with information technology experience in programming or computer hardware
- GPA of 3.0 or greater
- classroom experience coding in any of the following: C#, JavaScript, CSS, PHP, HTML or database development (MS SQL or MySQL)
- object-oriented design (OOD) or SQL programming skills
- aptitude in programming analysis and design
- excellent verbal and written communication and analytical and interpersonal skills
- availability to work up to 10 hours per week during the school year and up to 20 hours per week during the summer; hours are flexible to accommodate your busy class schedule
- The ability to take on challenges and address problems head-on
- Strong ability to collaborate
- Highly driven and resourceful

**How to apply**

If you are interested, please send your resume to vdellarocca@corestream.com. If you feel there is anything beyond your resume that would indicate your aptitude and/or desire, feel free to include a cover letter or include that additional information in the email.
18 Certifications Worth Having
18 Certifications Worth Having
Ryan Day, Content Marketing Manager at Global Knowledge

A certification is more than a gold star. It’s more than a pat on the back or a “job well done.”

Obtaining a professional certification is an indication that you’re an expert. It’s proof to employers, peers and even yourself that you speak and think in a specific language. It comes with the expectation that co-workers and decision-makers will call on you for advice and insight. Your experience and expertise will be key to a business’ growth in the face of internal and external changes.

Basically, a certification is confirmation that you provide value. And in a competitive and crowded industry like IT, it’s often not easy to stand out.

This is your chance.

Deciding to get certified is one thing. Selecting a certification is another.

What do you want out of it? A promotion? A higher salary? Viable skills?

With hundreds of certifications to choose from, how do you know which one is the best fit for you? Which ones are popular? Which ones have staying power?

In terms of standing out, just one certification may not be enough. In the field of network infrastructure and data center, for example, 88 percent of professionals are certified. As for Cisco-certified professionals, 82 percent are already working on their next certification. Now that’s some competition.

Whether you’re wading into the waters with a foundational credential or pulling all-night study sessions to prep for your six-hour CISSP exam, a lot of time and energy goes into certification.

Here are 18 options, in no particular order, that are worth your effort based on site searches, feedback from instructors and data in the Global Knowledge 2017 IT Skills and Salary Report.

1. AWS Certified Solutions Architect – Associate

I wonder if Amazon Web Services could have even envisioned the global demand for cloud when they launched their certification program just four years ago. Today, AWS certifications are wildly popular and produce some of the highest salaries in the industry.
AWS Certified Solutions Architect – Associate has been the standard bearer for cloud professionals, especially as many organizations have fully invested in AWS cloud services. In the IT Skills and Salary Report, it’s the third highest-paying certification in the United States and Canada ($119,085).

This associate-level certification is a perfect fit for IT pros looking to fill the cloud hiring void. According to our report, 28 percent of decision-makers are struggling to hire cloud professionals. With cloud emerging as the top tech interest area worldwide, that skills shortage isn’t likely to drop on its own.

With AWS dominating the cloud scene, AWS-specific expertise is often mandatory. And the positions pay extraordinarily well, which is why AWS certifications will likely remain in strong demand.

2. CCNA Routing and Switching

Of the 14,000-plus respondents to our IT Skills and Salary Survey, nearly 18 percent own a Cisco Certified Network Associate (CCNA) Routing and Switching credential, making it our most popular certification. It’s a foundational dive into the skills needed to plan, implement, verify and troubleshoot complex network solutions.

It’s no surprise that this is one of our most sought-after certifications since the cloud and changing technologies, such as quality of service (QoS) elements and wireless controllers, put an emphasis on networking importance. With mobile devices multiplying and the emergence of the Internet of Things (IoT), the skills required of a core network engineer are constantly evolving. This certification fills the skills gaps that occur when technology outpaces training.

The demand and staying power of this certification sets it apart. It’s also a necessary step toward achieving a CCNP Routing and Switching credential, which shows up as one of our top-paying certifications annually.

3. PMP® — Project Management Professional

If you want to talk about staying power, PMP® has been in the mix since 1984 and is as prevalent as ever. This certification is one of the most prestigious. Even after 33 years, it still means a lot.

Aside from its staying power, PMP® is a great credential to have if you’re trying to move from a technical to a managerial track. Thus, PMP®-certified professionals have higher-than-normal salaries, especially when paired with an existing credential. For example, when paired with an AWS certification, the average salary is up $30,674. When paired with a security credential, the salary increases by $26,515. Similar bumps exist when coupled with ITIL®, Red Hat® and Microsoft certifications.

Another reason PMP® is so widely-respected is its exam—it’s one of the toughest
tests in the industry. The exam tests five areas relating to a project’s life cycle and it's not specialized to any particular industry. Requirements include a four-year degree and at least three years of project management experience, with 4,500 hours leading projects and 35 hours of project management education. This certification certainly requires a motivated professional who is up to the challenge.

4. CompTIA Network+
CompTIA Network+ is so well-respected that Microsoft, Cisco and other brands have included it as part of their certification tracks. It’s a stepping stone to more intensive and vendor-specific certifications.

CompTIA Network+ proves a technician's competency in managing, maintaining, troubleshooting, installing and configuring basic network infrastructure. Since its launch in 1999, more than 235,000 people have become certified.

It currently ranks 20th in our top-paying certifications and is our sixth most popular. It’s recommended that candidates are also certified in CompTIA A+ and have at least nine months of experience in network support, administration or education.

5. CompTIA Security+
There is a critical need for qualified security professionals. CompTIA Security+ is an ideal first step for aspiring cybersecurity experts. All IT professionals, regardless of specialty, could benefit from this foundation-level, vendor-neutral certification.

CompTIA Security+ is our 17th highest-paying certification and eighth best worldwide. Candidates are required to have at least two years of experience as an IT administrator with a focus on security and have day-to-day information security experience. A CompTIA Network+ certification is also recommended.

With the addition of cloud and an increase in the complexity and frequency of data breaches, organizations are more concerned with security than ever before. This certification provides the knowledge necessary to anticipate, react to and guard against cyberattacks.

6. ITIL® Foundation
This entry-level certification is a win-win for individuals and organizations since ITIL-certified professionals are paid well and are better prepared to align business needs with the IT department.

ITIL Foundation helps you understand the IT lifecycle. Certified professionals are in the driver’s seat when it comes to supporting business outcomes and managing risk. Often, ITIL-certified professionals are at the forefront when an organization changes the way it does business.

Aside from its business benefits, ITIL Foundation has the 12th-highest salary
($93,638) and significantly magnifies other credentials you may currently have. When paired with a Cisco certification, the average salary increases by $13,333. Couple an ITIL certification with a project management certification, such as COBIT, TOGAF or PMI, and average salary bumps up $11,428. Similar increases occur when ITIL is paired with CompTIA, Microsoft and security credentials.

7. CCNA Security
Looking to combat and mitigate security threats in a Cisco network? Then this is the certification for you. CCNA Security validates your skills in developing an infrastructure and recognizing vulnerabilities in your network.

CCNA Security is in the top 20 of highest-paying certifications and is also a necessary requirement when working toward a CCNP Security credential, which has an average salary of over $100,000.

Just like all Cisco certifications, this credential is valid for three years. A CCENT certification or ICND1 v3.0 - Interconnecting Cisco Networking Devices, Part 1 is recommended before pursuing your CCNA Security certification.

8. MCSA: SQL Server 2012/2014
High salaries and popularity make this certification a double threat. Microsoft certifications are widespread in general—36 percent of our IT Skills and Salary Survey respondents are Microsoft-certified. Of that group, 44 percent hold a SQL Server certification. MCSA stands for Microsoft Certified Solutions Associate.

MCSA: SQL Server 2012/2014 is for individuals interested in data management. It confirms the essential skills needed to manage Microsoft’s SQL Server and is the first step toward earning the MCSE: Data Platform or the MCSA Business Intelligence certifications.

If you’re aiming for a position as either a software or database developer or perhaps a database analyst, this is a good place to start. It also pays well—MCSA: SQL Server is ranked 15th ($90,303) in our top-paying certifications.

Microsoft launched Windows Server 2016 in September 2016 with several new features, including:

- Nano Server
- Containers
- Storage Spaces Direct
- PowerShell enhancements
- Hyper-V enhancements

An MCSA: Windows Server 2016 certificate provides you with the skills necessary to reduce costs and deliver better business value. It’s ideal for professionals in positions
of a network administrator, computer systems administrator or computer network specialist.

It currently ranks 16th ($89,941) on our list of top-paying certifications. Last year, interest in Windows Server certifications trailed only CCNA Routing and Switching, CompTIA A+ and CompTIA Security+ in terms of popularity.

10. VMware Certified Professional 6 – Data Center Virtualization (VCP6-DCV)

Demand for VCP6-DCV is growing as organizations increasingly virtualize their data center and infrastructure. Data center managers are scrambling to hire specialized IT professionals to fill all of the needed roles. Getting certified in VCP6-DCV is a great chance to stand out as a virtual infrastructure specialist.

VMware-certified professionals make over $92,000 in the U.S. and Canada. That number rises to $96,309 for professionals certified in VCP6-DCV.

For those professionals who want to gain experience with VMware’s vSphere 6.5 (released in late November 2016), there’s also a certification for VMware Certified Professional 6.5 – Data Center Virtualization.

If you’re interested in virtualization, VMware has cornered the market. Learn how to build a scalable virtual infrastructure using vSphere including installation, configuration and optimization.

11. Certified in Risk Systems and Control (CRISC)

If you’re looking to get paid, CRISC has been the top-paying certification in three of the last four years. According to our IT Skills and Salary Report, CRISC average salaries include $127,507 in the U.S. and Canada, and $108,271 worldwide.

This ISACA cybersecurity certification is designed for IT professionals, project managers and other individuals whose job is to identify and manage IT and business risks through Information Systems controls. As the struggle continues in the search for experienced security professionals, ISACA has been out front by helping those in the cybersecurity field get more out of people already in the fold.

This certification is designed for driven professionals who work hard to keep up with evolving cybersecurity skills. ISACA-certified professionals are typically highly-motivated as 80 percent trained in some form in the past year.

12. Certified Information Systems Security
Professional (CISSP)
Completing the CISSP certification is like earning your master’s degree in IT security. This (ISC)² certification is so essential that it’s often a security staff requirement by organizations.

The average salary for professionals holding this certification is $118,179, which is fourth highest in the U.S. and Canada. Worldwide, CISSP-certified pros have an average salary of $103,981, which is second highest.

Released in 1994, CISSP has staying power. CISSPs are responsible for defining the architecture, design, management and controls that ensure a secure organization.

Prerequisites for CISSP includes five years of work experience and recertification is required every three years. Attaining this credential is validation of your years of security experience. And if you earn it, you’ve really earned it—the exam is a six-hour doozy.

13. Certified Ethical Hacker (CEH)
This advanced security certification puts you in the mind of a hacker. It’s your best opportunity to gain access to frequently-used hacking, tools so you’ll possess the skills to spot vulnerabilities in your own network.

The most acclaimed of EC-Council’s certifications, CEH is vendor-neutral and is modeled for any IT professional who is concerned with the integrity of network infrastructure. It also covers threats to the cloud, which is a growing challenge.

The CEH exam puts your hacker skills to work by grading the test-taker’s ability to find weaknesses and holes in an organization’s network defense.

To defend against hackers, you have to think like a hacker. CEH puts you in the best position to do so.

14. Citrix Certified Associate – Virtualization (CCA-V)
Training is paramount for Citrix-certified professionals. They’ve noticed a bump in salary and are often pursuing new skills and knowledge.

For IT operators and managers who oversee XenDesktop 7 solutions, CCA-V is their starting point. It had the 10th-highest salary ($96,100) among all certifications in 2017. And if an IT professional continues on to earn the Citrix Certified Professional-Virtualization credential, their average salary increases to over $102,000.

Salaries of Citrix-certified professionals really stand out. They earn roughly $14,000 more than their peers who lack Citrix credentials. If you’re a systems engineer, a Citrix certification can result in a 5 to 8 percent bump in pay.
15. Red Hat® Certified Engineer (RHCE)
RHCE is known for two things: it’s real-world exam and its reputation as the most rigorous and acclaimed Linux certification.

RHCE is for senior Linux administrators seeking to prove their ability to configure networking services and security on servers running Linux.

As for the exam, it measures actual competency on a live system. There are no multiple-choice questions. Instead, candidates are tested on how they perform and carry out tasks.

An RHCSA credential is a prerequisite. If you’re a Linux administrator, this certification is for you. It proves your senior-level expertise and real-world capabilities.

16. COBIT
With virtualizations and the cloud moving many components outside of the physical IT department, IT governance has become one of the biggest challenges in the industry. But it pays well. Salaries for governance certifications are the highest both in the U.S. and Canada ($115,521), and worldwide ($92,766).

COBIT, in particular, is a premiere governance certification that puts IT professionals in a unique position to align business objectives with IT.

It pairs well with ITIL by focusing on the capability of a process and whether or not it achieves its objective. A COBIT certification validates your knowledge of COBIT’s five basic principles:

- Meeting stakeholder needs.
- Covering the enterprise end to end.
- Applying a single integrated framework.
- Enabling a holistic approach.
- Separating governance from management.

17. MCSE: Cloud Platform and Infrastructure
MCSE stands for Microsoft Certified Solutions Expert and this Microsoft expert-level certification replaced MCSE: Server Infrastructure in March 2017. Understanding how to deploy Windows is critical and this certification prepares for deployment both on-premises and on the cloud.

All Windows Server and Azure exams can be found in this portfolio. It provides expertise in the modern data center, cloud technologies, identity management, systems management, virtualization, storage and networking.

Cloud administrators and architects are paid well too. Professionals certified in MCSE:
Cloud Platform and Infrastructure have salaries 10 percent above the global norm.

If you hold other Microsoft certifications, this one builds on the foundation of MCSA: Windows 2012, MCSA: Windows 2016, MCSA: Cloud Platform or MCSA: Linux on Azure.

18. Six Sigma
Six Sigma certifications aren’t IT-specific. Six Sigma is a business methodology that uses data and analysis to improve business performance with the goal of eliminating mistakes, waste and rework.

There are three levels: Six Sigma Green Belt, Six Sigma Black Belt and Six Sigma Masters Black Belt. All have average salaries ranging between $103,000 and $128,000. Six Sigma-certified professionals are paid well and their value is reflected in improved business performance.

Each candidate is required to have a leadership-approved project prior to certification training. It’s also unique in that there is no standard certification exam. Some organizations can even certify an employee for simply taking a course or completing a project.

Know Your Goals Before Selecting Your Next Certification
If you want to drive change, make sure you train with a goal in mind. Don’t just randomly select a certification from this list. Training for the sake of training isn’t enough. Map out your objectives and work toward them.

Just because a certification is popular doesn’t mean it’s the right fit for you. These 18 certifications are tried and true, but do they match your desired career path? Will they help you provide immediate value and drive change in your business?

Also, make sure you understand the value of cross-certification. For instance, Microsoft, CompTIA and ITIL credentials pair well with Cisco certifications. Broadening your expertise across multiple vendors can be a great way to distinguish yourself in the workplace.

According to our IT Skills and Salary Report, nearly 50 percent of respondents said they train specifically to prepare for certification. Ten years ago, that number was 9 percent. The value of certifications are no longer questioned. The only question is which one is right for you?

This list is a good place to start, but make sure to peruse our entire certification portfolio to start mapping out your pathway.
Learn More
To learn more about how you can improve productivity, enhance efficiency and sharpen your competitive edge through training.

- AWS
- Cisco
- Citrix
- CompTIA
- Cybersecurity
- ITIL
- Microsoft
- Project Management
- Red Hat
- VMware

Visit www.globalknowledge.com or call 1-800-COURSES (1-800-268-7737) to speak with a Global Knowledge training advisor.

About the Author
Ryan Day is a Content Marketing Manager at Global Knowledge.