

How to Get Hired for a Cybersecurity Internship

by Wilton Jowett

Introduction

This guide provides information relevant to those seeking an internship in the cybersecurity field. The first section covers strategies for making your resume stick out to recruiters; specifically those hiring for cybersecurity-related positions. The second section discusses strategies for finding an internship and how you should go about applying for it. The third section goes over how you should prepare for an interview. And the fourth section covers strategies for making your internship a good experience.

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Sprucing Up (or Making) your Resume

1 - Compose Your Resume: A resume is a means by which someone can advertise themselves to potential employers. Your resume should roughly contain a section for your objective, education, experience, and your skills or qualifications. At the top of your resume should be your name, address, and contact information such as your phone

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Career Objective

To obtain an internship pertaining to the Cyber Security field.

Education

Bachelor of Science – Computer Science Degree anticipated May 2012
University of Maryland College Park, MD

Associate of Arts – Applied Science and Technology January 2010
College of Southern Maryland La Plata, MD

Relevant Courses

- Object Oriented Programming I
- Object Oriented Programming II
- Discrete Structures
- Principals of Accounting I

Highlighted Academic Projects

- Implemented my own list, graph, and binary search tree in Java for assigned class projects and am continuing to implement structures in C this semester
- Learned about financial accounting and, in particular, about how to structure financial statements such as the balance sheet, income statement, and statement of cash flows

Relevant Experience

Intern Indian Head Naval Base, Indian Head, MD Summer 2008

Engineering Assistant

- Collaborated with others to research and test remote-control iRobots used in disarming Integrated Explosive Devices
- Independently learned the basics of LabVIEW software IDE and reported progress in a timely manner
- Held Secret Security clearance

Other Experience

Anchor Pharmacy, LaPlata, MD Fall 2009

Cashier

- Provided excellent customer service by taking initiative to satisfy customer needs
- Communicated with others to improve efficiency of accomplishing daily tasks, which allowed more time to assist customers

Skills

- Java and C Programming
- Intermediate level Japanese language proficiency

number and email. The following is an example resume written by a college student: As you can see, the name of this person is in large, bold font and it is centered in the middle of the page. Following the name is the contact information, and following the contact information is the various sections that convey the person's accomplishments.

2 - What to Include in Your Resume: Your resume should include each of the following: your educational experience, your relevant work experience (and perhaps your other work experience), your skills, and your activities and/or achievements.

Education

For the Education section, list any degrees that you have completed and the university that you received recognition from. If you have not completed your degree yet, list an anticipated date of graduation. This date is very important to recruiters as they want to know when you'll be available for employment. Also, include your GPA if it is greater than a 3.0 or if it is required for the position you are applying for. If you have taken any computer courses or any other courses relevant to the job you are applying for, list them in a Relevant Courses section on your resume. This section will give recruiters a better understanding of your relevant educational experience.

Relevant Experience

For the Relevant Experience section of your resume, include any technical job experience you've had that demonstrates your familiarity with computers. This section, in addition to the Relevant Courses section mentioned above can be a useful way to provide recruiters with an idea of your technical skills. If you do not have any relevant job experience, then include an Experience section on your resume instead of a Relevant Experience section. In this section include any work experience you have that demonstrates your desirable qualities. These experiences should include any teamwork experience, leadership experience, or other experience that shows that you are responsible, productive, or efficient. If you have extra room on your resume after including the Skills section and your Activities and/or Achievements (which is discussed below), then you may consider including both a Relevant Experience section and an Other Experience section on your resume. The Other Experience Section will serve the same purpose as the Experience section.

Skills

For the Skills section of your resume, list any skills that you possess that you want the recruiter to know about. Be sure to list all programming languages that you are able to write code in, as well as any technical experience you feel relates to the job you are applying for.

Note: For the Skills section of your resume, do not list any of your soft skills, such as working well in teams or good at communicating information. Instead list your hard skills, such as the computer languages you can program in or any foreign languages you can speak. Your soft skills should be conveyed in your Experience section.

Activities and/or Achievements

For the Activities and/or Achievements section of your resume, simply list any activities that you are involved in or any awards that you have received. This section provides recruiters with information regarding your leadership potential, and it can be very helpful in making your resume stand out.

3 - Use Key Words: Recruiters choose people to interview based on their belief of how well a person matches a job description. For any internship, you must be able to communicate to the recruiter how you meet the position's specific qualifications.

To convey this fact, it's important to use specific words in the position's advertisement. The following is part of an advertisement for a cyber-related internship position with Booz Allen Hamilton:

Our Internship Program is geared towards students who have diverse backgrounds and are equipped to solve the complex, multidimensional problems that Booz Allen Hamilton consultants face every day. We are looking for the future technical leaders who have a passion for technology and an interest in business areas.

After reading this part of the advertisement, you get a better sense of the type of intern that Booz Allen Hamilton is looking for to fill this position. When applying for such a position, you should customize your resume so that it expands upon, or at least mentions any examples that illustrate your diverse background, technical leadership, and/or interest in business areas. If you cannot think of any examples you have that illustrates these traits, then simply avoid mentioning them in your resume. In order to appeal to recruiters, it is important to provide them with examples of how you demonstrate the qualities mentioned in the job advertisement for the position you are applying for. You may not be able to provide examples for each description, but make sure to mention as many examples as you can that demonstrates that you are the right person for the internship you are applying for.

4 - Expand on Relevant Sections: A typical resume is only one page in length, but can be two pages if absolutely necessary. This limited space must be properly delegated so that the recruiter reviewing your resume knows everything he/she should know about you in regards to the job you're applying for. It's important that you draw focus to the parts of your resume that are more applicable to you.

Those who have completed multiple internships in the past may want to draw attention to this fact by having more space on their resume dedicated to the Experience section of his/her resume. Or, someone who has had little to no internship experience but is in his/her third year of college may expand on the Education section of their resume by including certain classes that help demonstrate his/her desirable qualities. If you have much experience in any area, expand on that experience by finding ways to make it relevant to the position you're applying for. If you don't have much experience in a

particular area, don't mention it at all on your resume so that there is more room for other sections that you have more experience in.

5 - Order of Sections: Another important way to highlight relevant sections on your resume is by choosing how high to put that section on your resume. Always put the information that is most relevant to the job you are applying for at the top of your resume. If you are a student with little relevant work experience, highlight your educational experience that seems relevant to the position you are applying for. For example, the advertisement from the previous section states "We are looking for the future technical leaders who have ... an interest in business areas." If you've taken a business class or been involved in any business related extracurricular activities, mention this detail in the Education section of your resume to demonstrate your interest in business areas. The same concept applies for work experience. If you feel that any work experience you have is applicable to the position you are applying for, mention it and elaborate on it depending on how important you feel it is to the recruiter.

Ultimately it is important to remember that recruiters typically have to select a few candidates from many, many resumes. The way your resume is organized can cause your resume to be discarded prematurely if the recruiter doesn't find what he/she is looking for in the first few glances. Follow the above-stated tips to avoid this common tragedy and give your resume a chance of getting you called in for an interview.

Finding and Applying for a Cybersecurity Internship

Now that you have your resume geared towards a cybersecurity internship, it's time to find a company to apply to. Many companies require the services of a cybersecurity specialist to protect valuable information. Companies such as banks, accounting firms, consulting firms, government agencies, and many more need ways of keeping secret information out of the wrong hands. You should not have much trouble finding a place to work that suites you.

1 - Find the Internship: As stated above, many places offer internships geared towards teaching interns how to keep information secure. The following is a list of top companies in the Baltimore-DC area that offer such internships:

- Booz Allen Hamilton
- Lockheed Martin
- National Security Agency
- Northrop Grumman
- SAIC
- The Harris Corporation

You may also try other methods to find companies that are currently offering cybersecurity positions. Besides doing a simple Google search, there are numerous tools

at your disposal that can be used to find such positions. One such tool is the following webpage from the University of Maryland website:

<http://www.cmns.umd.edu/careers/newsletter/internships.htm>

This page lists internship advertisements for University of Maryland students in the College of Computer, Mathematical, and Natural Sciences. Check it frequently to see if there are cybersecurity positions available. Also, frequent the University of Maryland's Cyber Security Club webpage to learn about upcoming talks and events relating to cybersecurity on the UMD campus.

<http://umdcsec.org/wordpress/>

The cybersecurity events that are posted on the Cyber Security Club's webpage are a good way to network with professionals in the field and to get to know other people who are looking for a cybersecurity internship as well. These events are often lead by employees of companies that hire cybersecurity interns. Talk to these people to learn more about the opportunities at their company and to possibly obtain a reference to someone you can forward your resume to. Also, create a profile on the University of Maryland's Careers4Terps website:

http://www.careercenter.umd.edu/page.cfm?section_ID=1&page_id=12

Doing so will allow you access to the Careers4Terps job/internship database. After you've followed the given steps and created your profile, scroll over the "jobs" tab on the top of the Online Jobs/Internship Database webpage, and select the Careers4Terps Jobs tab. Use this webpage to search for (and apply to) available cybersecurity jobs. Finally, subscribe to the Csemployment email list:

<https://mailman.cs.umd.edu/mailman/listinfo/csemployment>

After subscribing, you will receive emails almost daily about employment opportunities for college students with backgrounds in Computer Science or Computer Engineering. Frequently these emails will advertise available cybersecurity positions.

2 - Research the Company: There are many of company's hiring cybersecurity interns, and it is important to research each company to get a better feel for which one is the best fit for you. Researching a company before applying to it will also help you customize your resume so that it stands out more to that particular company. And if you are called in to an interview, you will need to know information about a company. Interviewers frequently ask questions about the company to make sure you know what sort of work you are applying for.

After following step one of this section, you should have found a couple of job postings for cybersecurity internships. To research one of these internships, go to the home webpage of the company who is offering the internship. A company's home webpage

will typically have an “About” link. Follow that link and read the corresponding page to learn facts about and history of the company. The “About” section of a company’s website will give you a better understanding of the type of work the company does.

When you’ve finished investigating the “About” section, go back to the home page. Many company websites have a “Career” link on their webpage. If there is such a link, follow it to the corresponding “Career” webpage. This page typically includes information about company benefits, life at the company, and internships at the company. Explore this page to gain a better understanding of what it would be like to have a career at that company.

When you have finished investigating the “Career” section of the company’s website, follow other links on their homepage. Each company webpage will vary and there will be more information scattered throughout the company’s website. Research the website until you are content and feel you have a solid understanding of what the company does. While a company’s website is a convenient way to research what life is like at a company, it usually only gives you one (typically highly optimistic) perspective. To gain a more in depth perspective of what working at a company is really like you’ll need to talk to someone who works at the company.

One way of finding such a person is by attending the University of Maryland’s semiannual career fair. Numerous employers send employees to represent a company at the career fair, and there is a likely chance that one of the companies you are researching will have representatives at the career fair. Attend a career fair and talk to the employees who represent the companies you are interested in applying to. Ask them any questions you have about their company and about what it’s like to work at that company. Attending a career fair is also an excellent way to apply to a company, and this topic will be discussed in the next section. The spring career fair is typically held mid-February and the fall career fair is typically held late September. Check the University of Maryland’s career website to get the exact dates of the career fair, who will be attending the career fair, and general information about the career fair.

Another way to gain information about a company is by asking your professors and advisors at the University of Maryland if they know anything about the company. Many of the computer science professors at UMD have had experience working with companies that hire cybersecurity interns. They will be more than happy to provide you with advice regarding your interest in that company.

3 - Apply for the Internship: The majority of internships can be applied to online via the company’s webpage. Usually the webpage will have a Career link that you can follow to search and apply for jobs. There will typically be a place for you to submit your resume to them and they may require you to submit additional information as well. Simply follow the application steps that the company provides and you’ll be on your way to getting called in for an interview. Submitting your resume online is a common way to get your resume to the company. Another way of submitting your resume that also

makes you stand out to recruiters and allows you the opportunity to ask questions about a company is by doing so at a career fair.

Career fairs are a great way to meet employees and company recruiters face to face. The University of Maryland hosts career fairs semiannually. At a career fair you will find many employers who are looking for college students just like you. You can check ahead of time to see which employers will be attending the career fair at the University of Maryland's career website. When you go to the career fair, find the booths for each company you wish to apply for. Take some time to talk to the employees that are at the booth and ask them for information regarding internships at their company. They will be more than happy to answer any questions that you have. Ask them specifically about the internship you are interested in applying for. And finally, ask them if they will accept your resume for consideration. Not every company will be taking resumes. Even so, the career fair is still a good opportunity to learn more about the various places hiring cybersecurity interns and to start networking with companies.

Note: Make sure to get a business card if an employee is offering them. A business card can be a valuable tool in getting an internship. With a business card, you have a way to contact someone on the inside of a company who can keep you up to speed on any career events that a company may be hosting, or any career opportunities currently available with the company.

Preparing for an Interview

Now that you've been called in for an interview, there are a few steps you should take in preparation to ensure that you leave a positive impression with the interviewer. An interview can come in many forms. You may be interviewed by one person or by multiple persons. The interviewer could ask questions that are mostly behavioral, mostly technical, or a mixture of both. The more prepared you are before walking into an interview, the better your chances are of obtaining the position.

1 - Know the Company: If you have not done so already, follow the instructions detailed in step 2 in the Finding and Applying for the Internship section. Booz Allen Hamilton is a major consulting firm, and on their website they note that the two most common mistakes candidates make when interviewing with their firm is "inadequately preparing for the interview, and not researching the firm." It is important to be familiar with the company that you are interviewing with. And if you really want to impress the interviewers ask them questions that show your interest in the firm, such as how the state of the U.S. economy has impacted their company.

2 - Common Interview Mistakes: Listed below are some of the most common interviewing faux pas:

- Showing up late

- Talking bad about previous employers
- Dressing down, poor presentation
- Coming unprepared; Not knowing anything about the company or the position
- Bad manners: eating, smoking, cell phone
- Giving a bad reason for wanting the job
- Letting nervous tics control you, body language, eye contact
- Too much information
- Arrogance
- Answering questions with only “Yes” or “No”
- Forgetting to clean up digital dirt (MySpace, Facebook, etc.)

Avoid these common mistakes for your interview to increase your chances of leaving a positive impression with the interviewer.

3 - Top Tips for a Successful Interview: To increase your chances of getting the position, follow these steps to make your interview a successful one:

- Research the company and understand the opportunity for which you are applying
- Write an inventory of your key achievements and failures before coming to the interview
- Have a strong sense of self-awareness, and review your resume to jog your memory
- Anticipate the questions the interviewer is likely to ask and practice your answers (potential questions are discussed below)
- Write 3 or 4 things you want the company to know about you and incorporate them into your interview
- When asked, use recent examples from internships, school, community service, hobbies, or work experiences where you demonstrated the skills that the company you are applying for seeks. When sharing negative experiences, choose those that had positive outcomes or from which you learned something
- If you’ve answered a question and the interviewer pauses, follow up with a relevant question about the company or ask whether the interviewer needs additional information. Don’t babble or talk incessantly to fill the silence
- Answer the question that was asked—and only the question that was asked

Because the internship you are applying for is a cybersecurity internship, the interviewer will likely ask you behavioral and technical based questions. The behavioral questions tend to be open-ended. There is no correct answer to behavioral based questions, and their purpose is simply to see how you respond. Some examples of these questions include:

- What is your greatest weakness/strength?
- How do you handle stress and pressure?
- Describe a difficult work situation/project and how you overcame it.
- Why are you the best person for the job?

- Why do you want to work here?

The best strategy for answering these types of questions is to be prepared. Before going in for the interview, come up with some answers to these commonly asked questions (more examples can be found at <http://jobsearch.about.com/od/interviewquestionsanswers/a/interviewquest.htm>). As stated in the above tips, when asked you should use recent examples from internships, school, etc. to demonstrate that you have the skills that the company you are interviewing with wants. Use examples from school such as group projects to illustrate your teamwork skills. Also use examples such as assignments or projects you found particularly difficult and how you overcame that challenge.

For the technical interview questions, you must demonstrate your competence in working with computers and your ability to think logically. You may be asked to solve a technical problem by writing code. Or the technical question could be less focused on the actual code and more focused on the concept. For example, the interviewer may ask you a question such as the following: “Let’s say you have been hired by a ski manufacturer (the manufacturer produces skis). The manufacturer wants you to design a device that will make her skis safer. What kind of device would you create and how would you implement it?” The answer you come up with for this kind of question is not as important as the way you come with the answer. The interviewer wants to see how you think, so think out loud as you work towards your solution.

Making the Most of Your Internship

1 - Be Enthusiastic: Show your employer that you are excited to be working for this company. One of the top reasons students pursue internships is to be hired by the same company after they have graduated, and many companies almost exclusively hire employees from their interns. Show your supervisor and the people you work with that you want to be at there company by completing your tasks in a timely manner, being polite and friendly, and being open to learning new things. You will likely have to learn about topics that you have not covered before in your courses. For example, maybe you know how to program in Java and the assignment they give you requires C programming. Do not worry; they will teach you everything you need to know. And if you are having problems with any aspect of your work, do not hesitate to ask your supervisor for help. It’s their job to make sure you are satisfied with your internship so that you come to work for them after you’ve graduated.

2 - Network: One of the most useful things you can do for your career is networking. The expression “it’s not about what you know but who you know” is not unfounded. Developing a professional relationship with your colleagues and supervisors will give you a point of contact later in your career. For example, if you are involved in a summer internship, your internship will likely last only three months. When you’ve finished your internship, you’ll only have an outsiders perspective of what is going on in the company, much like before you received the internship. However, if you have developed a

professional relationship with your supervisor and colleagues, you will be able to contact them about current opportunities the company is offering.

To network is simple. Just follow step one in this chapter and keep any contact information you receive from your supervisor and colleagues. Then contact someone whose job is of particular interest to you to set up an interview. Let them know how you received their contact information and that you'd like to learn more about what they do for the company. The following is a list of possible interview questions you might ask:

- What is your role in the organization?
- What path did you follow to obtain this role?
- What do employers look for in job candidates looking to enter this field?
- What are the top five skills necessary for someone to succeed in this industry?
- Can you describe the employment outlook for new college graduates in this field?
- Do you expect job opportunities to grow in the future?
- What is the best way to find out about job opportunities in this industry?
- Can you suggest any other people I could talk to? Do you mind if I use your name as a referral?
- Can I please have one of your business cards?
- I am/will be looking for a position in this area. Would you mind if I left a resume with you if you hear of any positions that come available?

Always be polite during your interview, and remember that the person you are interviewing is giving their time to you. After the interview, keep in contact with that person. In the future they can be very helpful in getting you to where you'd like to be in your career.

3 - Learn: As stated in step one of this section, you will likely be faced with problems that you are not able to solve with your school experience alone. These problems are good, as the company you are interning with wants to teach you how to work in their company. Be open minded, and frequently collaborate with your teammates or supervisor to better understand the tasks which you have been given. One of the more important things you will be learning during your internship is how to work in a team and how to work with your supervisor.

You will likely be working with a team of college students like yourself when you start to work on your internship. This situation is a chance to gain valuable experience, as much of the work you will be doing in the real world as a cybersecurity specialist is collaborative. You will also be responsible for reporting to your supervisor during your internship. This situation is also similar to the real world in that you will have to report to the colleagues you work with and higher-ups that depend on your work and input. Above all, it is important to have fun and be positive throughout your internship. By following this piece of advice you will gain the most benefit from your internship experience.