A SUMMER INTERNSHIP: PRACTICE FOR THE REAL WORLD
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ABSTRACT
A summer internship is an amazing opportunity. It is a chance to apply what is taught in the classroom, make valuable contacts, and learn about an industry. In this paper, I share my experience as a summer intern at Hewlett-Packard. I hope reading about my experiences will help others considering an internship position. I strongly encourage women in computing programs to seek internships and similar opportunities.

1. INTRODUCTION
I was an intern in the human factors engineering department at Hewlett-Packard in Boise, Idaho this summer. A human factors engineer (HFE) designs user interfaces and is concerned with the usability of a product or system. As an intern, I learned a lot about the product development lifecycle – the stages a product goes through from early inception and design, to development and testing, and then deployment, when the product is manufactured and sold in stores.

The education I gained in three months could have never come from a textbook. I experienced first-hand how valuable contacts are for obtaining an internship, that there are big differences between what is taught in school and how things are really done in industry, and that an intern’s perspective is valuable to a company. I hope sharing my experiences will encourage other women in computing fields to seek internships and similar opportunities.

2. OBTAIN AN INTERNSHIP
The thought of a summer internship can be daunting for a student. You may feel that you are not yet prepared to work for a company. Do not sell yourself short. As a student, you bring valuable perspective to a company and demonstrate a willingness to learn just by being there. You do not have to have all the answers.

However, you do have to be smart in the application process. Searching for an internship can be like looking for a job – it takes hard work and patience. Do not expect companies to contact you; you must be proactive, especially if you are in a field where many students are competing for internships. The application process starts early and you must do your best to stand out from other applicants. The best way to stand out from the crowd is to lose the crowd! Do not simply submit your resume and forget about it like all the other applicants. Go beyond by making contacts and being persistent.

2.1 Contacts (and persistence) are important
You have probably heard it a hundred times already and I am saying it again: contacts are vital to obtaining a job, an internship, and just about any other opportunity. Using contacts is not considered sleazy or dishonest. It is a normal part of life in the workplace and professionals do it all the time. I would not have secured an internship at HP were it not for contacts with other people.

Two years ago I graduated with a bachelor’s degree in psychology and wanted to work for the Hewlett-Packard human factors engineering lab in Boise, Idaho. It was a perfect match for my psychology background and interest in technology. I obtained the lab manager’s email address and sent my resume directly to him, in addition to posting it on the HP web site like everyone else seeking employment at HP. The manager kindly responded to my email, indicating that most HFEs have masters degrees but that they would keep my resume on hand in case one of the positions that did not require a graduate degree became vacant.

Last year I enrolled in the Human-Computer Interaction Design masters program at Indiana University. The time came to apply for summer internships (it comes as early as December so prepare your resumes now) and I applied at several companies, including HP, whose website indicated they were not hiring HFE interns. As a long shot, I replied to the manager’s email (now nearly two years old) and sent an updated resume. It was so satisfying to state in the email that I was now pursuing a masters degree and wanted to intern in the HFE lab. A few months went by with no response and I assumed the manager had either left the company or had a new email address. At last, he replied. He had been busy convincing executives to create a position just for me. A month later, after a whirlwind of in-person and telephone interviews, I had an internship at the company I had wanted for years to work for. This never would have happened had I simply applied online like everyone else.

A network of contacts is invaluable for future career success. Contacts with managers, current employees, recruiters, professors, and even other students can be effective when trying to obtain an internship (or job). Keep business cards from career fairs and contact information of anyone you have talked to about your career goals. Likewise, be a good contact for others. Help fellow students get in touch with someone you know who might help them. You never know who might be in a position to help you in the future.

Celebrate your success when you land that great internship, you probably worked very hard to get it. But do not think the challenge is over. The fun has just begun!

3. SUCCEED IN THE WORKPLACE
An internship is a great way to be exposed to a work environment – to see how the work is done, how coworkers interact, and how to be successful – from a safe distance. Your temporary intern role lets you practice these skills, make mistakes, and learn from them.

3.1 Be Flexible
Work environments are very different than school. You study theory and develop skills at school; at work you apply them. Very few work situations match exactly what you learned in a textbook. This can be difficult to get used to, especially after years of learning the “right” way to do things. Successful interns
(or anyone for that matter) are those who can be flexible in applying what they have learned to a real situation with constraints. (Really, if things were as straightforward as they seem in textbooks, what would they need us for?) I was surprised to see many differences between the development process at HP and the development process taught in a textbook. Some parts of the process were abbreviated, others added. Although I did not understand everything, the rationale for some processes made sense the more I learned about the industry. I realized that market demands and budget constraints have a big impact on the way work is done. It is probably the same in other industries.

3.2 Ask Why
Since work can be so different than what is taught in school, you should not expect to understand everything. Never hesitate to ask why something is done a certain way. No one expects you to know everything and you will understand a lot more at the end of your internship if you ask questions. Do not be discouraged when there is no clear answer to your question, or when the answer is, “That’s the way it has always been done.” Things change quickly in the technology industry, and in HP’s case, many processes had simply evolved to accommodate new technology. There is not always a clear answer as to why. Situations like these are perfect for an intern – you might have the time no one else does to fully examine a situation and make recommendations.

I worked on a project at HP that no one else had time to handle. In fact, my greatest contribution was simply the fact that I was constantly working on the issue, bringing topics to meetings and following up on requests. As a result, a lot of work was accomplished and I gained a deeper understanding of the development process.

3.3 Contribute
As an intern, you will have many opportunities to contribute. Do not hesitate to speak up if you have an opinion about something. I hung back at first, afraid to say out loud what I was thinking. “What do I know,” I thought, especially compared to people who have worked at this company for years. You do not have to know everything to have a good idea. And do not worry if it seems completely different than what everyone else is thinking – one of the reasons companies value interns is because of the fresh ideas they bring. So speak up.

4. EXTEND THE OPPORTUNITY
One of the most important things you can do during your internship is meet people. And not just the people in your immediate work group – meet people from other departments and ask what they do. I quickly learned that as an intern, I could get honest answers to forthright questions like “What is your day to day work like?” “Do you like what you do?” and “What are the skills someone seeking this type of job should have?” You might be surprised how helpful people can be, and how valuable advice from people in the field is. What you learn by asking questions might guide the decisions you make about future courses, further education, or even your career choice.

While you are working at your internship, be aware of problems or ongoing projects that you can contribute to after returning to school. If appropriate, see if you can do work for the company that will count as course credit. There is no better way to demonstrate mastery of course topics than by applying them in a real company with real constraints. A problem that I noticed at HP is now my master’s capstone project. I get to work on a real-world problem and HP gets a year’s worth of attention to an issue they knew they had but did not have time to resolve.

5. CONCLUSION
If you have decided you want an internship, start preparing now. Talk to career counselors and update your resume. Attend career fairs and email companies you would like to work for. Keep in touch with recruiters and follow up on all communications so you do not get lost in the crowd. When you begin working at your internship, remember to ask questions and be flexible. Go outside your comfort zone by meeting people in other departments. Get to know as many people as you can while you are there and consider everyone you encounter a new contact who might help you in the future. Stay in touch with these contacts when you return to school.

It might be challenging at times but the benefits of an internship are well worth it. You will get to network with people, learn about an industry, experience working with coworkers, and learn about a company you might want to work for when you graduate. That is another great thing about an internship – you get to test out working for a company without accepting a permanent job. You might decide you do not want to work for that company, or that you really like the company and want to return when you graduate, in which case those contacts you made will be a huge help!

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