Women’s Hackathon  
Information Systems Department, College of Business Administration

A Proposal to the Women’s Leadership Council

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Hackathon Video (from 2016): https://tinyurl.com/lfdg5n2

This proposal is for funding to run the Fourth Annual Women’s Hackathon in October to coincide with the International Women’s Hackathon after the Grace Hopper Celebration of Women in Computing. Before discussing the specifics of the proposed event, this proposal will discuss reasons why Women’s Hackathons are important, and the results of the first three Annual Women’s Hackathons.

Introduction

Women are vastly under represented in America’s critical IT workforce. The 2011 US Census reveals that although half of the jobs in the U.S. are held by women, only about a quarter of technology jobs are held by women. An even more sobering fact is that the US Bureau of Labor Statistics predicts that by 2018 there will be 1.4 million open technology jobs in the United States and, at the current rate of students graduating with degrees in computer science, we will fill only 29 percent of those openings with women graduates in computer science and information systems.

Despite how it generally is presented, this is not a “women’s issue.” This is an economy issue, and it is a quality issue. It is an economy issue because there will be far more technology jobs available than the country can fill with the current rate of both men and women graduates. Without more people to fill the jobs, we will not be able to grow the economy. Further, we know from research that diverse design teams produce better products. The introduction of women to design teams provides a different perspective on the process and has been shown to improve the final product. So, women in technology is a quality issue as well.

As a department at UMSL, we are also concerned with our students and their long-term prosperity. IT jobs are stable, high-paying jobs that can help all of our students, especially women, to improve their standing in society. For all of these reasons, the Information Systems Department is determined to increase the number of women pursuing Information Systems (or Computer Science) degrees and careers.

Hackathons

The term “hack” has a negative connotation in general parlance because it is associated with people committing crimes. To the computer community, however, the term “hack” refers to exploratory programming. Generally one hacks (or develops a hack) to solve a computer problem quickly, or to solve a particularly messy computer problem. As we all know, a marathon is associated with doing something for a long period of time. The portmanteau of hack and marathon, hackathon, refers to a group of people who meet to collaborate intensively on software projects for an extended period of time. People in the IT community have been sponsoring hackathons since 1999.

Although hackathons are recognized as places for great experiences in developing one’s skills
and for networking, few women in technology attend them. There are many reasons for this, including home responsibilities and lack of interest. However, many women have find hackathons to be less than friendly to women participants; rather than being places where a person can grow, too often hackathons end up being a place where women need to justify being in the room.

To respond to these and other concerns, the Anita Borg Institute and Microsoft launched Women’s Hackathons. The goal is to empower young women interested in technology by providing a fun and safe environment in which to explore technology development and innovation. Increasingly, universities and cities have sponsored such hackathons to ensure women are able to reap the advantage of the exercise and network with others.

**The First Three Annual Women’s Hackathons at UMSL**

The IS Department sponsored UMSL’s first ever Women’s Hackathons in 2014 by participating in the International Women’s Hackathon which declared as its theme that participants need to build a web application, mobile application, or game to help organizations and communities prepare for effective response after natural disasters. The topic, suggested by the International Hackathon organizers, was intended to appeal to the desire to have an impact and to improve the world, both ideas that research has shown appeals to women professionals. The theme changes each year.

The Department was able to secure funding for the event through women who serve on the IS Advisory Board and their contacts. The funding was used to provide breakfast, lunch and dinner to the participants and mentors. Providing all meals is considered a best practice of hackathons because they work nonstop all day. To provide a level playing field, UMSL provided technology to the participants in two of the learning studios in Express Scripts Hall.

The Women’s Hackathon was a big success. It attracted 30 students (28 of whom were from UMSL) and 11 mentors (2 of whom were UMSL alumni).

The Women’s Giving Circle supported our Second Annual Hackathon in November 2015. We attracted 40 young women, a 30% increase from 2014, about half of whom were enrolled either in programs in Information Systems or Computer Science. The other half of the group included some students who intend to major in Information Systems, but had not changed their major officially. In addition, the event attracted students from the MBA program, from Biology, Criminology and Criminal Justice, Political Science, Education, and the General Studies program. Thirty five percent were enrolled in a Graduate Program. Of the remaining sixty five percent of the students, the majority of the students (58%) were Seniors, followed by 27% Juniors, 12% Sophomores, and even one Freshman! Two of the participants were not UMSL students.

The Women’s Leadership Council also supported our Hackathon in 2016. We had a successful event, but not as successful as we wanted. The Women’s Hackathon attracted 32 young women, which is a decrease from the number we attracted in 2015. We primarily attracted students from Information Systems, with one from Business (general) and one non-UMSL student. About 30% of
the students were graduate students. Among undergraduates, 39% were Seniors, 22% were Juniors, no sophomores, and 9% Freshman; one student was not enrolled at UMSL. The good news is that for half of the attendees reported this was the first hackathon in which students ever participated.

In addition to the participants, there were members of the IT community who volunteered to coach the participants for the day. These people represented Allied Tech, Asynchrony, Boeing, Enterprise, Spry Digital, World Wide Technology, and UMSL. The mentors were a critical component of our program because of their role in getting projects started, their ability to make suggestions during the day, and the role they played in judging the applications.

We anticipate the process for the 2017 event will follow a similar schedule as in 2016. In 2016, the day began with Dean Charles Hoffman welcoming the participants to the event. He was able to set the tone of the morning by sharing his experience shattering the glass ceiling by hiring the first woman CIO in Mexico while at Telcel. Clearly his presence, and his examples demonstrated the importance of the event in the eyes of the University. This and the Chancellor’s visit later in the day, gave the day an importance and credibility to the women participating.

Further encouragement was provided by our keynote speaker, Mr. Mark Stewart, General Manager and Vice President for Software Development of Bullhorn. Mr. Stewart spoke of his own career which has centered on automation of recruitment and staffing, salesforce automation, and CRM. He also spoke briefly about diversity in organizations and how he has seen software support growing in diversity.

The students self-organized into teams and were given approximately eight hours to complete their work. This year, the challenge was to “build a game, desktop, mobile, or web application to promote diversity in organizations, events or education.” Mentors lead their teams through an extensive ideation session followed by assisting them as they developed their application.

While the applications created at the Women’s Hackathon were impressive, they were not the highlight of the event. The greatest achievement of the day was that the Women’s Hackathon created interest and passion for programming in many female students, most of whom had no or little programming experience or education. Including the mentors helped the teams develop better group skills and to learn more about paired programming techniques.

The Proposal
The goal of this proposal is to secure funding to repeat the success and increase the number of participants for a women’s hackathon to be held next Fall at UMSL. If funded, the hackathon will give female students at UMSL the opportunity to strengthen their programming and systems development skills. In addition, the hackathon will allow the students to network among themselves and, more importantly, with women in IT in industry. Those opportunities should, in turn, make the students more marketable, more confident, and better IT professionals. Not only will the participation be a desirable item for their resume, the participants will have a system for their portfolio and to share with prospective employers.

We hope to increase the number of student participants as well as the number of mentors available to the students. The event format will follow that used in the first two years. It will begin with an introduction, followed by ice-breaking activities and work on the project. As was done this year, next year we will follow the topic and procedures suggested by the International Women’s Hackathon.
There will, of course, be a competition for prizes at our hackathon event. In addition, we will encourage the students to participate in the international competition by submitting their project via the website. This would make them one of a community of about 400,000 participants, in over 500 hackathons, producing over 25,000 products (according to the Challenge website). We will also encourage them to join other hackathons, such as the general UMSL Hackathon in the spring.

In addition to the Hackathon coding, Women’s Hackathon will participate in “Sit with Me.” This program is a national advocacy campaign of the National Council of Women in Technology. It serves to recognize and validate the important role that women play in creating future technology. The program features a single red chair. Women sit in the chair and share their story of how they got there and how they will impact the future of technology. We added it to this event to help the women demonstrate ownership of their own technology-based careers in the future. We put the photos up on Facebook and Twitter to publicize the event. Our plan is to broadcast the photos and messages again to get attention to the event. You can view some of the photos in the appendix to this proposal.

Participation in this community will help publicize the work of women students at UMSL, and widen their professional network. Further, we believe this will increase their confidence in their work and their ability to compete successfully with their male colleagues. Finally, participation in this international competition will help the women see how colleagues in other cultures approach problem solving, thereby increasing their own openness to systems design.

Through this effort, we want to empower UMSL women to become leaders in information systems and computer science and to produce future innovations in technology. We want every woman to have a fun, safe environment in which to explore computing and help solve problems in the world today. Further, we want to connect the women to the international stage and bring the importance of technology education and women in computing to the attention of the community.

**Timeline**

We will begin planning, including selection of a specific date when the rules of the International Hackathon are made available; this is generally mid-summer. Shortly thereafter, preparations will begin to reserve classrooms and technology for the event. At the end of the summer, we will recruit and secure women mentors to participate the day of the event. Some advertising will occur during the summer, but the primary time for sharing information about the event will begin a month before the event.

**Advertising**

As discussed earlier, we were not satisfied with the size of the 2016 Hackathon, and thus want to increase the advertising for this event. Of course, we will take advantage of the department’s electronic discussion lists (listservs) to share the availability of the event with all majors. Faculty members will announce the event in classes and fliers will be posted across the campus. We will also use social networking technologies to share the event with a wider group of people. Finally, we will have posters placed around campus, and will encourage word-of-mouth advertising.

**Logistics Changes**

In 2016, we spent more per participant for food than expected year because we anticipated more students to be in attendance than what came to the event. Next year we will need to have some preregistration so we can predict food needs better.

Of course there will be minor tweaks associated with the topic for next year and the mentors
and speakers who join us. But we do not anticipate any major changes.

**Evaluation**

We will evaluate this program in two ways. First, we will provide a questionnaire after the event through which to judge the students’ satisfaction with the event and whether the event provided a positive experience. We will use past instruments (such as those rating the event used in 2015 in which students rated the overall success as a 4.1 out of 5 points). On these instruments, we will ask for suggestions for improvement. In the past we have received very positive comments, but no major changes were suggested.

Second, in addition to increasing the total number of women who participate, we want students to persevere in technology so we plan to track how many participants submit their application to the national competition, and how many participate in addition hackathons.

Second, we will want to increase the number of women who participate, thereby making a bigger impact on the society. Further, we will evaluate how many women submit their applications to the national competition and how many will participate in an additional hackathon during the year. In addition, we want to increase the number of women who participate who are not currently engaged in information systems or computer science programs in an effort to increase the numbers of women in the field.

Finally, we want to increase the women’s confidence. We will look for evidence of that, such as the increase in women stepping up to become leaders in the IS Department. In 2016, Jestika Gajjar, Kerrine Nelson, and Tracee Stewart organized the Second Annual Cybersecurity Conference, which attracted 200 practitioners, academics, students and corporate recruiters. Or, the evidence might be in the form of students who join Launch Code to improve their skills.

**Budget**

We are asking for $3000 from the Women’s Giving Circle to help support UMSL’s Fourth Annual Women’s Hackathon. This budget requires that we secure funding for the prizes from sponsor-companies (approximately $1200), and that the department will cover the costs of certificates/folders (approximately $150).

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Appendix –
“Come Sit with Me” Photographs

Individual photos were as different as the women in the Hackathon. Different people sent different messages about their roles such as shown below.

Some learned they could just be themselves and still have a career in technology.
All of them increased their confidence in their abilities.