Proposal to Bring a Hackerspace into SUNY Fredonia

Written By:

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**Introduction:**

A “Hackerspace” is a small room or building which serves the sole purpose of being a medium for collaboration among people of similar interests in the field of computer science. It is a unique setting in which people are able to get together to collaborate on projects as well as receive feedback on their work. There are Hackerspaces all over the world including several in New York City; one in Buffalo, NY; one right next door in Dunkirk; and another few more in upstate Pennsylvania. For more information on Hackerspaces and their locations please see <http://en.wikipedia.org/wiki/Hackerspace> and <http://hackerspaces.org/wiki/> .

**Inspiration to bring a Hackerspace into SUNY Fredonia:**

The inspiration to bring a Hackerspace into SUNY Fredonia came to me through a series of several recent events. First, I’ve been applying for internships lately in an effort to start making money. The student body here is exceptionally friendly and I’ve frequently swapped resumes with other students. I’ve noticed on every resume I’ve seen that students tend to have very little, if any, work to show off that they have done outside of the classroom. When asking other students about this they’ve tended to tell me that they don’t lack motivation to pursue projects outside of the classroom, they are simply intimidated by it. Around the same time I was approached by students with an offer to build a website for a political campaign. I turned down the offer and was asked if I could recommend a way they could get in touch with other CS students to offer the position to. I couldn’t think of any. Most recently, the CS department opened a course in Android Programming inspired by an unprecedented amount of interest in the subject when students were given the chance to apply for an internship to learn about it. This shows me how CS department is willing to try new things and to do their best to encourage elective study. All of this has lead me to believe that SUNY Fredonia desperately needs a Hackerspace.

**My Proposal for a Hackerspace in SUNY Fredonia:**

My idea for a Hackerspace in SUNY Fredonia is a rather simple one. Students interested in participating would meet once every three weeks in an unoccupied room in the Williams Center for roughly three hours (though this would be the ideal time it could be shortened or lengthened and meetings could be occur more or less frequently appropriately). A meeting would begin first by the head of the Hackerspace giving general announcements. Next, students would take turns demonstrating projects they are working on. Demonstrations may include a lecture or presentation if the students demonstrating so wish. After demonstrations are done students would then propose projects that they would like to work on and desire collaborators for. The remaining time would then be spent by students collaborating and working together within the Hackerspace. This would also be an appropriate time for which students in need of computer science skills but the lack the appropriate knowledge themselves (for example: political science students in need of a website or students who need their computer fixed) to join the Hackerspace and receive help with their problems. A Hackerspace meeting will ultimately be a social gathering geared towards allowing students to both show off and receive constructive feedback on what they have been working on outside of class as well as for students to collaborate with each other on these projects all in the interest of computer science.

**Subjects that a Hackerspace would benefit from working in**

The following is a list of projects and subjects that I would try to gear work in the Hackerspace towards. Students are of course free to work on whatever they wish but these topics will probably appeal to most of them. I have background experience in all of them and would be able to help jumpstart student’s projects within them:

* Nintendo Wii Software Development via “Homebrew”
* SONY Playstation 3 Software Development via “Homebrew”
* Microsoft Xbox 360 Software Development via Microsoft’s XNA SDK
* Microsoft Kinect Software Development via open source drivers ( <http://openkinect.org> )
* Android Software Development
* iOS Software Development
* Cross-Platform Software Development
* Game Development
* Embedded circuitry with microcontrollers (which can delve into areas such as Robotics)
* Building computers
* Building open source hardware devices; I would be especially interested in getting some GoodFET boards assembled (extremely useful for students like myself enrolled in CSIT 411) <http://goodfet.sourceforge.net/>
* Defensive and Offensive Programming
* Computer and Network Security
* Software Emulation
* Programming with technologies like the Twitter API, Facebook API, Subversion, Mercurial, and Git

I would also be able to assist students in publishing and selling any of their work. This would help students to build strong and varied resumes. Speaking of resumes, there may eventually be volunteer positions (such as a website maintainer) students can take to work as part of the Hackerspace.

**What I Need from the CS Department**

All I am asking from the CS Department is a simple approval of this idea, assistance in being able to rent a room in the Williams Center once every three weeks, and help making students aware of the Hackerspace. If at all possible, I would like to have the first (of hopefully many) Hackerspace meetings sometime this coming February. Professors would of course be more than welcome to sit in on Hackerspace meetings as well as demonstrate anything that could be useful to the Hackerspace. However, I do want to stress that the Hackerspace will be operated by students, not faculty. No funding or equipment will be necessary. Students will provide whatever they need themselves. Should the purchase of additional equipment be deemed necessary students will split the cost and I will negotiate with manufacturers to get a reduced price on purchases (I have done this successfully many times).

**My Credentials to Run and Operate a Hackerspace**

I have a background in programming in more languages (and markup and scripting languages) than I can count. I specialize in C and C++ programming and PowerPC assembler. I currently maintain a little more than twenty open source projects (primarily for the Nintendo Wii). I’m very young; I’m only 17 and a freshman at SUNY Fredonia so I would be able to follow and work with the Hackerspace for the next seven semesters. My grades are adequate and I assure you that my professors will unanimously agree that I am a dedicated, driven, and passionate student.