**ECS101 CS Section: Homework Assignment 1**

*Upload your solution to Blackboard HW1 link. Due Thursday September 3nd. 9AM,*

*100 words or less for each question.*

1. **(10pts) What does the title of the book mean? “The Pattern on the Stone”?**

The title of the book is a metaphor for computers and how they are seen by society vs how they actually are. The “pattern” on the stone represents software and various things done on a computer, while the “stone” represents the computer itself. It is an accurate metaphor because to other people, the patterns look “complex and mysterious,” as Hillis puts it, but in reality, they are easy to understand if you know a few principles.

1. **(10pts) The book is dedicated to Marvin Minsky. Who is this person? What is the relationship between Minsky and the author?**

Marvin Minsky is the co-founder of MIT’s AI laboratory and the creator of the “Society of Mind” theory, which explains how intelligence is the result of several non-intelligent parts working with one another. The author, Danny Hillis, was Minsky’s student when he was pursuing his PhD at MIT.

1. **Read the Wikipedia article about the author, Daniel Hills.** 
   1. **(10pts) Think of one thing you like about the author—such as his interests, his life events, what he did, etc.**

I love the fact that Hillis somehow found a way to make a computer out of Tinkertoys, as it shows not only genius but dedication. Also, he was very fortunate to have worked under Claude Shannon, the man who invented the bit. Finally, Hillis’ versatility really shines throughout the moments in his career. For example, he produced content for elementary schools, designed parallel supercomputers, and even developed technology for Disney. All of these accomplishments are very different from one another.

* 1. **(10pts) How is he different from or the same with the general public’s perceptions about computer scientists?**

Hillis is very similar to the general public’s perceptions about computer scientists, with a few key differences. Heis an excellent programmer, builds computers himself and even specializes in robotics. However, Hillis’ mind is very different from the general public’s perception about computer science. While the general public may look at computer scientists as people who think about and focus on how to use and make computers as well as their functions, Hillis focuses on much larger and broader ideas that apply to computer science.

1. **(10pts) Donald Knuth is a well-known computer scientist. Find information about this person on the Internet and in your opinion, what is the most important contribution he made in computer science and explain why you think so.**While all of Donald Knuth’s contributions are important, I believe his most important contribution is the introduction of Literate Programming (through his WEB and CWEB systems). This is extremely important because not only did it make programs easier to approach, but it allowed higher quality programs to be made since designers could lay out their ideas so clearly. It was essentially the first pseudocode, which is used by almost all programmers today.
2. **(10pts) Read the New York Times article “Steve Jobs was a Low-Tech Parent”.** [**http://www.nytimes.com/2014/09/11/fashion/steve-jobs-apple-was-a-low-tech-parent.html**](http://www.nytimes.com/2014/09/11/fashion/steve-jobs-apple-was-a-low-tech-parent.html)

**Explain why Steve Jobs and other Tech Gurus limit their children’s exposure to technical gadgets and the Internet.**

Steve Jobs and other Tech Gurus limit their children’s exposure to technical gadgets and the Internet because it prevents them from becoming addicted, similar to what happened to their parents. In addition, while computers can be used for art, computer science and other great things, it can also be harmful and dangerous. Limiting their children’s exposure prevents them from experiencing these harmful things online, and allows them to focus on other things such as books and history.