Why a Career in Computer Science for Women?
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In my Grace lecture on Empowering Women given on April 1, 2015, I had a chart that discussed why a women should choose Computer Science for a career. In this article I elaborate on that chart. [https://www.utdallas.edu/~bxt043000/Motivational-Articles/Dr-Bhavani-My-Story-April-2.pdf](https://www.utdallas.edu/~bxt043000/Motivational-Articles/Dr-Bhavani-My-Story-April-2.pdf)

**Given the opportunity women can excel in any subject especially in computer science**
I have taught high school students early on and noted that motivated women are equally as good as motivated men in mathematics. I have taught computer science for undergraduates and graduate students since 1980 and have found that motivated women are as good as motivated men in all aspects of computer science – from theory to programming to system development. Furthermore, unlike say mathematics, physics, and chemistry, computer science does not have centuries of history. Therefore it is a subject that can be mastered without much difficulty if a person is motivated to learn the field.

**Computer Science is a very exciting field with so many innovations and developments happening so rapidly**
The changes in computing are rapid. Starting from theory to compilers to operating systems to networks. Every day significant innovations are being made in academia, industry and government research labs. These innovations are coming not only from the US/the Americas, but also from Europe, Asia, and Australia/South Pacific and soon I hope from Africa as computer science research and education spreads around the world. The World Wide Web (WWW) has promoted innovation across the globe. Due to social media the world has become global and an event/incident is made instantly known around the globe. Since there are so many opportunities in computing, women as well as men can not only take advantage of the benefits but be part of this revolution by developing technology. The opportunities are endless.

**Computer Science can be integrated with any area – arts, humanities, natural science, social science, engineering, business, medicine and law.**
Computing is now at the heart of every area. Fields such as computational chemistry, computational biology, computational finance, bioinformatics, geoinformatics, brain informatics, and computational social sciences are emerging where computing is being integrated with numerous fields. Furthermore, computer technologies are being used to solve healthcare related problems, make diagnosis of major diseases, carry out robotic surgeries and be an expert adviser to lawyers. We are even going to see driverless cars and possibly pilotless airplanes. The demand for computer scientists is going to be endless. Therefore why not women take advantage of all the benefits and intellectual challenges offered by computer science?

**Computer Science has many options from research and academia to product development to start-ups**
While many fields do have variety where one can choose to get into academia or industry or have a startup, no other field can rapidly show the benefits. While it may take decades to bring a
new dug to market, it may take just a year to bring a new software product to market. Therefore one can afford to try out new areas in one’s career as one can move on to do other things if something does not work out as planned. In fact many areas, such as the retail industry, have also had huge gains in the start-up business by using software services. Again why should a woman not take advantage of these opportunities and possibly become an instant millionaire?

**Millennial women and beyond have the flexibility and freedom to choose careers and have female role models in computer science that us baby boomers never had.**

While there is still a significant shortage of women in computing, and in some ways there is a lower percentage of women getting into computing than there was back in the 1980s, still there are more women in terms of numbers in high tech positions than there were back in the 1980s. There are more women department heads in computing and even some at the dean, provost and president levels. There are also women CEOs in some high tech computes. Therefore the younger women now have female role models in computing that we never had. This should encourage and motivate young women to get into computing.

**Computer Science is a flexible field; you can work from home most days making it ideal for women to have a family and career**

This should be extremely appealing to women. Software can be developed anytime anywhere. Therefore women can set up home offices and develop software, use Skype for their meetings and this way be at home when the children go to school and be at home when the children return from school. If a computer scientist needs to meet clients, she can arrange to have meetings late mornings or early afternoons. Such flexibility can rarely be found in most other careers.

**Computer Science is a highly paid field with numerous job opportunities; why not women take advantage of these benefits?**

Why not a woman take advantage of a high paying field? A BS in computer science can start anywhere from 80K-100K and more in certain computing fields such as cyber security and data science. Graduate degrees pay substantially more. While money should not be the main motivation in selecting a career, having money certainty does not hurt. Therefore why not love what you do and at the same time make substantial money doing what you love?

**Women can be financially independent with a career in Computer Science; financial independence mean self-respect, less stress and confidence.**

I have read that many women stay in abusive marriages because they cannot make ends meet with what they make. They stay in unhappy marriages because they have no choice. With a career in computing a woman can earn a substantial income. Therefore she now has the choice to stay in a marriage. This in turn will give her self-respect and peace of mind. This is I believe one of the more important benefits for a career in computing for a woman.

**Computing jobs cannot be overtaken by Robots**

It is expected that many jobs, even those of knowledge workers, are going to be taken over by robots. However computing is at the heart of automation and robotics. Therefore one needs computer scientists for the foreseeable future to develop automation software that will be the way of the future. In my opinion, a good computer scientist will never be made redundant.