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SE 494

Cumulative Reflection

Reflect on your 4-year experience at Iowa State University. Remember to highlight things like your ability to communicate, utilize your engineering knowledge, and function within teams as well as what is highlighted below. Here are some questions to answer as a part of your reflection:

1. How do you think ISU has prepared you to:
   1. Design systems or processes?

ISU has prepared me on design systems and process through the start of my degree in Software Engineering. For my first class, Cpre 185, I learned to setup a low-level C program to get data off of a controller. In Cpre 281, I learned Verilog design and to connect gates to make complicated systems.

* 1. Formulate and solve engineering problems?

ISU has prepared me to in solving problems in almost every class. The Software Engineering major focuses on this exact problem.

* 1. Impact engineering solutions in a global/societal context?

My general electives have made sure to tie in global/societal context. My English 314 class taught me how I can use memos and language to help any problem or project I may have. My project class have helped push applications in helping people. For example, we created an application that help people navigate in different weather conditions.

* 1. Consider ethical implications of your engineering decisions?

In almost all junior and senior year classes, we had an ethical discussion. Especially, the Volkswagen issue in lying in their data. These engagements have pushed my thought process of the industry. It has prepared me for possible industry decisions which may lie to the customers or government. I am making sure

1. What things have you done at ISU to prepare you to:
   1. Work in groups?

I have had many work groups starting with Com Sci 309. Com Sci 252, 309, 319, 329, 339, and Cpre 381, 308, and SE 409, 491 have all used work groups. Each class depends on how much you interact with a group. However, all of these class encourage co-development, team work, and project structure.

* 1. Recognize contemporary issues?

In my software management class, we talk about contemporary issues. We talk about what to do, how to handle it, and move forward.

* 1. Understand professional and ethical responsibilities?

In my software management class, we talk about professional and ethical responsibilities. We talked about managing groups with scheduling and to-dos. We talked about responsibilities of ethical responses.

1. In class projects & problem solving tasks, did you draw upon information, research or experiences beyond what was provided in class to successfully complete your work? Please state which resources here and how they helped you to complete work (e.g. library resources, specific professional journals, experts in field, other students).

I have drawn upon information, research, or experiences beyond what was provided to me in class to successfully complete my work. For information, I have used my past knowledge in internships with android and web design. I have used google and slack overflow for questions and issues that I have gotten stuck on. I have reached out to professors with questions, issues, and information to help complete my assignments. I have used research journals to help me with senior design since we were using a new technology that does not have much application use beyond journals. (Ex. Channel State Information)

1. How did learning activities outside of the classroom (required 124.5 credits), such as Student Orgs, Career or Study Abroad Fairs, Undergraduate Research Experience (REU), or other university programs help you to understand the importance of Lifelong Learning?

The programs that I attended outside of class was invaluable to the importance of my lifelong learning. I have participated in SHPE-MAES for 4 years, with this organization I have helped with external affairs, outreach, recruitment, vice president, and president. I have participated in LEAD Learning Community to help multicultural freshman in getting started as engineers at Iowa State. I have participated in other clubs and organization, like Google igniteCS, which goes to local high schools to participate in teaching computer science. I learned from these organizations and clubs by learning leadership skills, teaching skills, organization skills, and money management.

1. Have you started to undertake any new learning to improve your ability to apply skills or knowledge to new problems and to develop confidence in taking risks? Please explain.

In all of my classes, I have learned to think of new problem-solving skills. Data structures taught me new ways of putting data together. Computer Architecture showed me low level look on how CPUs are created software wise. Operating Systems taught me the lower-level software used and created to make operating systems. My software projects is what gave me confidence in taking risks. Projects made me learn new things and developed confidence in what I do since I made sure to push my project forward.

1. In the context of the first four questions, if you were to do your undergraduate work again, what things would you change?

If were to go through undergraduate again, I would change quite a bit. I would put more work into learning data structures and algorithms as they are key to job search and security. I would be a little less involved in other organizations besides SHPE or LEAD. I would become a TA in some classes to get more teaching experiences. I would apply to more companies to get more internship experiences. I would start on research my freshman year to get a better start into graduate school.