The Best is Yet to Come

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Montana State University
Industrial and Management Engineering Department
Graduate School Admissions
Personal Statement
“You haven’t done anything yet.” The Chief Engineer snarled over a hefeweizen and a crab cake. We had spent the last two days in eight hour meetings. Both of us had presented our work to the program sponsor. The Chief Engineer had presented very complex software architecture. I had fought for time on the agenda, but effectively presented a new approach for designing task based user interface displays for a combat system. We both came out with follow-on actions and work but I was fishing for feedback. His response not exactly what I was looking for.

I disagreed with him initially, I felt like I had done something – a lot of things. However, the more I thought about it; maybe the keyword in his statement was “yet”. I still have a lot of things to do.

Despite results of standardize test scores, and personality tests that prophesied my destiny as a librarian, I made it through the core engineering courses and excelled in the industrial engineering (IE) degree specific courses. My experience working in a copper recycling plant gave me industrial perspective to comprehend industrial engineering theories of bottlenecks, capacity, and throughput. Through undergraduate courses, I set up career goals that always included a master’s degree in industrial engineering. Before transitioning directly from undergraduate to graduate courses, I knew I needed some professional maturing and real world education to support my academics.

Landing in the human performance engineering branch at Naval Undersea Warfare Center at Keyport, Washington. I was involved with numerous projects that challenged core engineering capabilities, engineering management skills, and statistical understanding. Projects included planning and designing a flyaway workstation, testing the impacts of sea swells on human performance, certifying diving systems, and applying systematic approaches for incorporating human requirements into a combat system. In a fifteen hundred person engineering organization, I am one of four industrial engineers. I find myself educating coworkers of IE capabilities and when that fails, resolving to tireless demonstration. Being a forerunner, it allows me latitude to strategize unique approaches for designing or validating design, tailoring existing processes to meet the needs of the customer, and consulting
managers and engineers as they develop productivity or quality measures. On numerous occasions I wished for a more in-depth understanding and additional academic research experience to self verify that I the applications were appropriate and the results were sound.

Engineers in the Department of Defense often say that they never used their education. In contrast I use my education every day. I am transformable from a safety engineer, to a market researcher, to a manufacturing engineer, and project manager using the all same tools. Graduate school is an opportunity to deeply refine my understanding of the application of the methodology and tools.

I believe there are significant opportunities for my fundamental knowledge to mature particularly in the application of IE in optimization and decision making in production management, human factors, and general operations. Optimization applies to every area of an organization and IE theories are all applicable to decision making and decision making is an art — crafted from historical statistical evidence, future projections, the organizational balance, and pure instinct. Not every engineer has the ability to quantify, measure, and set criteria and very few business managers have the quantitative skills. The IE principles can be applied universally and a more in-depth understanding of them will only enhance effective optimization and situational decision making. Both directly appeal to me and support goals in personal and professional arenas.

The strongest draw I have to Montana State is the size and aptitude of the IE department faculty. I attribute the success I had academically and professionally to the professors at Montana State University. The combination of professors teaching techniques, and their endless dedication to see me and my classmates succeed provides enticement to come back to Montana State University Industrial and Management Engineering program.

The Montana State IE faculty, research, and programs are multifaceted. As I plan to continue to use all of the IE skills in non-traditional and traditional applications, the opportunities to get involved in any of the primary areas of IE are available with the current research at Montana State. I have not decided on a focus area yet, but my primary interest areas, production management, operations research, and human factors are available and
robust at Montana State. I am interested in the research that has been dedicated to applying optimization and production management theories to health care. Health care efficiency has a global and local impact and speaks directly to some of my personal goals to apply industrial engineering in non-manufacturing applications. The last few years I have been working in human factors and I anticipate the IE program will become more established in this area in the coming years. I am also very interested in the Montana Manufacturing Extension Center (MMEC) technical assistant program for graduate students. The idea of applying IE to real life multifarious problems simultaneously with an enhanced education is an ideal situation.

What the outlook is after completing a master’s degree is still indeterminate. I envision a career of variety. Over the course of my career I want to work for a non-profit organization, a start-up company, a large organization, and provide consulting and adult learning. I would like my career to be a conglomerate of creative interpretations of IE practices applied to multiple applications but resulting in communities of practice and shareable experiences.

A bachelor’s degree, five years working for the Department of Defense, some volunteer work and a lot of self identifying - I think I have done something, but I recognize that there is a lot more to do.
My name is ... and I would like to attend Montana State University's Industrial Engineering masters program. MSU interests me for many reasons. I enjoyed attending for my undergraduate degree because it is a small program and it felt very personal. Returning to school would allow me to deepen my existing knowledge and to focus on topics more in depth. My goal is to eventually work for a small to medium-sized company, so I would like to gain some experience and become more confident in applying my knowledge correctly. Lastly, I would like to improve myself in more than just academics; learning new things everyday is a challenge and very important to me.

Graduate school is the next step for me to become a more marketable individual to companies. In the Bozeman area, and especially with the economy, companies mainly want experienced individuals. My current experience is barely past entry level and graduate school would allow me to expand my knowledge while gaining some experience. Topics I would like to focus on are topics such as inventory management, manufacturing, and quality.

The MSU IE program interests me specifically because it is a small program. MSU's undergraduate program was very good for me because it offered personal attention. All of the professors were very helpful to students and made classes much easier to appreciate when it was clear that the teacher cared about the subject they taught. MSU also has many opportunities that I would like to become part of such as GRA and GTA positions, as well as positions with UTAP, and student organizations.

I prefer the smaller, personal aspect of a smaller company where employees are not just a number. I feel that a job is also more enjoyable when there are different responsibilities rather than the same thing everyday. If I were to work for a smaller company, however, being confident in applying techniques correctly would be very important. I think that attending graduate school would help me achieve my goal.

While returning to school and strengthening myself academically in industrial engineering, I would also like to gain knowledge in other areas such as the Japanese language. After my year in Japan with the JET Program, I feel the need to keep up my language skills in order to communicate with my teachers that became my friends. It would be great to be able to use Japanese with a future job. I enjoy the Japanese culture and respect it greatly, especially since it has become part of who I am. A big goal I have is to continue to learn and challenge myself throughout life.

In conclusion, I would like to attend Montana State University's Industrial Engineering master's program for many reasons. It would help me develop specialized areas and to apply concepts more accurately in a manufacturing environment. MSU has a small industrial engineering program and is a great learning environment. I think that in keeping with a small program, would help me understand a little more of how a small company would feel. Working for a small company would make each day different and full of challenges, and I feel that learning new things and getting challenges helps to shape a person into who they will become.