

# Joshua Wiens

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Dear Hiring Manager,

I am interested in the “Project Engineering – Manufacturing/Fabrication” position recently posted by your company. While browsing the LinkedIn job feed, this listing was by far the most striking to me in terms of representation of my personal experiences and interests. The combination of project management and hands-on design/fabrication experience is exceptionally analogous to my final year of my undergraduate degree. On top of that, I have spent the last two and a half years working for a major cyclotron (particle accelerator) manufacturer/service-provider working with all sorts of electrical and mechanical systems ranging in size from circuits and actuators that fit in the palm of your hand to 100kW RF transmission and 300ton 360° gantries.

During my final year of undergrad, I spent a vast majority of my time working on four-man team projects for both “precapstone” and capstone mechanical engineering courses.

Precapstone involved the development of a self-driving model vehicle capable of traversing an obstacle course and “drilling” into “the ground” at the end and popping a balloon. Having a strong background in electrical and computer engineering I solely developed and tested the entire electrical power distribution and digital control subsystems. As well, I successfully implemented rapid prototyping techniques to create a functional test model very early on in the build period which immediately exposed shortcomings in initial concept providing feedback of immeasurable value during the development process of our award-winning final product.

Capstone involved the development of an autonomous electrohydraulic system capable of positioning itself in two dimensions using feedback from Hall effect sensors. Being the team leader for this project, I quickly implemented a modular approach to the design process to maximize the effective productivity of each individual team member. Each of two hydraulic actuators (representing each dimension) were assigned to a single team member to focus on, one team member to support and research existing technologies, and infrastructural components (control and power subsystems) as well as managerial responsibilities such as productivity reporting, purchased material documentation, and maintenance of technical documentation fell to me.

My contributions to each of these projects is briefly documented as short SlideShare presentations which are available from my LinkedIn profile. If it isn’t obvious already, I am more than enthusiastic about this field and enjoy nothing more than improving and broadening the skills that allow me to be the best engineer I can be. I simply thrive in the dynamic and high-pressure environment of project development. Given the opportunity, I know I could be a valuable asset to your team.

Sincerely,

Joshua Wiens