



CONTACT

Mary Elizabeth Breen-Lyles



(920) 370 - 1896



mary.breenlyles@gmail.com



www.marybreenlyles.com



721 N 1st Street Unit C
DeKalb, IL 60115

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To Whom It May Concern:

Having delighted in finding many different programs to write for use in my years of research, I have developed an acute passion for programming. This is why I am writing to communicate to you my interest in the open Software Engineer Intern position with Quicket Solutions. My commitment to learning and excitement for technology is reflected by my experience producing instrumentation for scientific experiments, designing and writing software programs to use in my various research projects, and working with a variety of software and development platforms over the past 5 years. Upon graduating in August, I want to apply my skill set and education while pursuing a career within the software development industry. I believe this position with Quicket would be a terrific way to begin that process, in addition to granting me the opportunity to learn new tech and be a part of a cross-functional team helping communities by improving government technology.

In the last five years, I have completed 4 different research projects, in an array of unique engineering and programming contexts, and I hope to draw on those experiences while finding my place in the software industry. I am currently in my final semester of Northern Illinois University's master's program in mechanical engineering. My work is focused on molecular simulation and computational materials design, primarily in LAMMPS, a molecular dynamics package for doing large-scale parallel computations. As a graduate research assistant, I use a diverse set of software to generate and analyse data produced from reactions within a molecular system to certain input stimuli. I have personally written or collaborated on all of the required code for each of these elaborate simulations and had to quickly gain working knowledge and understanding of each of the unique languages associated with a varied set of required molecular dynamics software platforms, using Linux as my principal development/runtime environment. I have also frequently employed python scripts for data processing during this project. Prior to this, I took courses in OO programming, and data structures and algorithms in Java at Beloit College. At the same time, I held a research assistantship working in the accelerator laboratory where I designed and machined many electronic and mechanical devices to be used for a linear proton accelerator and its bending electromagnet, among other duties, and ultimately wrote my undergraduate thesis on the repair and tuning process I conducted on this magnet. My team and I worked to develop and test hypotheses related to our objective of restoring the accelerator's functionality using thermocouple data, thermal imaging, and voltmeter/ammeter data collected from the magnet and other accelerator components. After having had ample programming experience in both my academic and independent work, I am capable of learning very quickly and effectively implementing new knowledge and original techniques in my work.

Without a formal degree in computer science, I can understand skepticism of my software development capacities, but I have proven through my research and independent work that I am more than capable of quickly getting myself up to speed on new platforms and delivering real solutions. I am fully confident that given the right opportunity, my skill set and attitude toward programming would prove to be of great value to Quicket's engineering teams. Through my experiences with programming, troubleshooting, and working closely with the students and staff on my past engineering research teams, I have fostered critical thinking skills, strong mathematical aptitude, a passion for problem solving, and developed an eagerness for learning and attaining not just exceptional performance from myself, but from my code as well. Over the years, I have acquired a diverse background, including design and programming on multiple platforms, proficiency in data analysis, and experience using a variety of software and development environments including MATLAB, LAMMPS, VMD and LabVIEW. I have also had experience programming in languages like Java, Python, HTML, CSS, JS, MySQL, and Tcl. An opportunity to apply these skills within the greater industry would be a privilege. For a more complete snapshot of my qualifications, I encourage you to take a look at my resume.

Thank you very much for your time and consideration. If you are looking for someone who simply has the most experience within a specific software niche, I'm probably not your girl, but if you are looking for a tenacious team member willing to put in the necessary work to rigorously learn on the job and enthusiastically pursue project goals, I can certainly do that for you. Please feel free to contact me by the above email or phone number, and I'll be happy to speak with you more.

Respectfully,

Mary Breen-Lyles