



## CONTACT

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### To Whom It May Concern:

After taking delight in writing many different programs for use in my academic and professional pursuits, I have developed an acute passion for programming. This is why I wish to communicate my interest in Braintree's 2020 Software Engineer Internship. My commitment to learning and excitement for technology is reflected by my experience producing code and design elements for my contract work, 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. This has led me to desire a career where I can apply my unique skill set and training. I believe an internship with Braintree 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.

In the last five years, I have completed 3 separate development contracts and 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. Right now, I am working independently with clients to develop both small and large scale web applications and tools, including an extensible Python web scraper built with Selenium and ChromeDriver, and a set of marketing optimization tools for Amazon vendors that leverages the Amazon Advertising API. In addition to this, I recently completed my final semester of Northern Illinois University's Master of Science program in mechanical engineering. My work focused on molecular simulation and computational materials design, primarily in LAMMPS, a molecular dynamics package for performing large-scale parallel computations over distributed systems. I used a diverse set of software to generate and analyse data produced by reactions within a molecular system using Linux development and runtime environments, wrote and collaborated on all of the required code for each of these elaborate simulations, and had to quickly gain a working knowledge and understanding of each of the unique languages associated with a varied set of required molecular dynamics software. I also frequently employed Python scripts for data processing. 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. After gaining this useful programming experience in both my academic and independent work, I have become a fast learner and effectively implemented 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, unique perspective, and outgoing attitude toward programming would prove to be of great value to Braintree's development teams. My experience designing and delivering code, troubleshooting, and working closely with the students and staff on my past teams has fostered critical thinking skills, a strong mathematical aptitude, and a passion for problem solving. I have also 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 insight on multiple platforms, proficiency in data analysis, and experience using a variety of development environments and software including MATLAB, LAMMPS, VMD and LabVIEW. I have also had experience programming in languages like Java, Python, PHP, 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 a tenacious team member willing to put in the necessary work to rigorously learn on the job and enthusiastically pursue project goals, I would love to fill that role. 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