AUDELIA SZULMAN

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Fall Part time Internship and Winter OPT, 2020

Dear All,

I am a second year Master student in Aerospace Engineering at the University of Michigan. I am pursuing a triple diploma with the Arts et Metiers, Paris, a top French Engineering University, and a Certificate in Innovation and Entrepreneurship at the University of Michigan. I have been exploring summer internships where I can further my passions and see what a career in the aerospace industry would involve. My main goal is to become a manager in an engineering company, which is why I am gaining experience and knowledge in the Aerospace field, as in the Mechanical and Electrical field. I am excited to apply for a part-time internship as well as a working opportunity during the semester.

I am an extremely hard worker and have the drive to learn whatever skills may be needed on the job. I take initiative, as shown by the volunteering work I did for 1 month in the Israeli army when I was 15 years old. I helped the militaries in our base give women more tasks and leadership roles. I also developed a musical ear by going to music school from 5 years old to 15 years old which allowed me to have certifications in piano, orchestra, music reading, vocal and stage performance. This music school helped me become more open-minded and hard working as it was in parallel with my studies. I used these certifications as well as my personal knowledge to teach music reading and piano to young students.

Before my engineering school, I did 2 years of prepatory school that prepared me for admission to a top Engineering school. These 2 years are well-known in France as being really challenging. During that time, I had a project with Airbus Defence and Space where I modified a Low Dropout (LDO) to make it work with earth components (as it was suited for space components) and studied the response (thermal and current) to different current, as well as how to optimize the circuit. It was an enriching internship that led me to apply to Thales DMS for a summer internship during my Engineering University studies. At Thales DMS I was working in the department of Radar and Space and was given multiple different tasks. I assisted engineers by gathering data on tests made on radars for the military aircraft the Rafale in anechoic chambers. By giving me independence, I was able to assist with numerous labs and I took several initiatives that were welcomed by the engineers. This included testing the performances of accelerometers to determine precision loss over time and crossing it with a cost-benefit study to establish whether buying a new equipment was worth it or not.

During my time at Art et Metiers I had different projects that helped me work with a team and get accustomed with technical softwares such as Catia, a modeling and simulation program (as well as Abaqus, Matlab, Python, 20sim,...) These products gave us the opportunity to simulate a turbine and see the amount of stress we could apply to it depending on its shape. We also had a project based on a specific problem: How to link a break to its wheel on a plane. These projects helped us develop several skills in the engineering field and in the art of communication, as we presented our project to teachers and defended our solution. The last project I worked on was my favorite. We were asked to link an electric scooter (such as Spin, Lime,...) to a wheelchair in order to allow disabled people to use an electric scooter in their everyday life. We came up with a prototype by working with a start-up. This project taught me a great deal about the positive impact my work can have on those around me. At the University of Michigan I joined the BLISS (Bioastronautics and Life Support Systems) and worked on developing an interface used by the astronauts on the future Gateway, spacecraft that will soon orbit around the moon. This project as well as my summer internship, which consisted in optimizing the design of the future electrospray propulsor by taking into account all the uncertainties, were the first two project were I had to speak in English and explain the progress in front of well informed engineers (both from NASA) and it showed me that, by fully understanding the project I was working on, I could easily explain what was happening. It also helped be break that language barrier fright that I put on myself.

Working at your company would excite me and tap into my enthusiasm for engineering. I took classes in Multidisciplinary Design Optimization, Finite Elements, Intermediate Dynamics, Electric Propulsion and Project Management and Consulting for entrepreneurs. I would love the chance to apply the knowledge I have gathered. I hope to be able to join your team this semester.
Thank you for your time.
Sincerely,
Audelia M. Szulman