David Tran

B.S. Candidate · Aerospace Engineering (Space Track)

University of California, Los Angeles

(818) 518-3108 | davidt964@ucla.edu | davidt964 | davidt964

Monolith Materials

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134 South 13th St., Suite 700
Lincoln, NE 68508
USA

For the position CFD Intern (Job ID: N/A)

Dear Monolith Materials:

About Me

I am an Aerospace Engineering junior pursuing the Space track at UCLA. Although I am in the process of taking the specialized upper-division coursework, I have acquainted myself with the material in my free time and am interested in fields that would allow me to apply theoretical and practical skills such as programming and physics: namely, computational fluid dynamics and rocket propulsion systems. I developed this interest throughout the duration of Transfer Bridge and my undergraduate career, as I genuinely enjoyed working on projects that had real-world implications. In addition, for my information regarding my simulation work, please click on my Github link above, where I utilized Python and MATLAB to develop various CFD simulations tools. Since this industry experience will be my first one, my desire is to further apply the skills I developed to improve existing simulations and optimize complex systems through means of testing and analysis!

Professional Aspirations

I have devoted a lot of my free time to taking advantage of any opportunity that comes my way to further expand my skill set. For example, over this past summer, I was a part of a summer transition program where I learned programming languages such as MATLAB and Python and technical skills like how to work with Arduino and SolidWorks to create projects such as an autonomous car. During a 48 hour Hackathon, I was responsible for the wiring of the prototype autonomous car and aided the other members with the programming of the car's smart behavior that allowed it to navigate a course while successfully avoiding any obstacles. Having worked on these projects in a virtual environment, I have the soft skills necessary to communicate and adapt effectively to any setting.

At your internship, I can provide a unique perspective that comes from my transfer experience and work diligently to create the best possible product. I am currently working on personal projects that simulate incompressible flow around various bodies such as an airfoil in MATLAB, Python using the source and vortex panel methods, comparing them to commercially available CFD software such as COMSOL. I have also recently joined the Center for Translational Applications of Nanoscale Multiferroic Systems as an undergraduate research assistant, where I am working under Professor Greg Carman and graduate student mentors to develop accurate simulations of nanoscale antennas in MATLAB. Currently, we are seeking to implement these antennas in the heart, serving as a communication medium, having the capability to transfer power wirelessly, and ultimately improving patient quality of life by eliminating the need to extract leads. Developing accurate simulations ensures that the system is safe and reduces costs by preventing the need to fabricate physical models.

With a strong background in simulation and practical application, I am confident that I am the candidate that can exceed your expectations! I am more than willing to provide any additional information upon request, and I would love to interview with your team to learn more about your opportunities or hiring plans. Thank you so much for taking the time out of your day to consider my application! I am looking forward to your positive reply.

Best,

David Tran