ANDI ZHOU

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Dear Ms. Annie King and the Tesla Recruiting Team,

I hope this letter finds you well! Recently, I had the privilege of advancing to the final round for the Thermal Performance Validation role at Tesla Energy. While I was not chosen, I was deeply impressed by the team's warmth, their willingness to share insights, and the evident pride in their work. These interactions only strengthened my desire to contribute to Tesla's ongoing innovation and the vision of an electrifying future. After reflecting on my discussions with the thermal validation team, and considering my experience in thermal simulation and validation, I believe I would be a potential fit for the Thermal System Aerodynamicist position.

While my timeline might seem shorter, the depth, intensity, and outcomes of my internships and project team experiences have equipped me with a skill set I am confident rivals that of many with more extended periods of exposure.

At Zoox, I revived a powertrain coolant system test stand that was stagnant for 2 years in just 9 weeks. This project sought to validate the 1D simulation previously conducted by our team. My design recommendations, based on my testing data, increased the system flow rate by 7.5%. My manager highlighted my fast-paced work ethic and emphasized that I produced more data in 9 weeks than the project had in the previous 2 years.

Further enriching my experience in CFD software are my internships at Volvo Truck North America, where I designed a swirl air-coolant separation tank using Star CCM+ multiphase flow, achieving a 99% air separation efficiency and reducing its mass by 40% compared to the original concept given.

To further my expertise in simulation, I implemented my own CFD solver for both Euler's equation of compressible flows and the incompressible Navier-Stokes equation. I firmly believe that as a thermo-fluid engineer specializing in simulation, it's crucial to peek into the black box of contemporary CFD software. In this project, I've implemented both the first and second-order finite volume methods, as well as the advanced Discontinuous Galerkin finite element method for both external and internal flows.

Tesla's impact on the modern automotive landscape is revolutionary, and the vision of transitioning the world to sustainable energy is truly inspiring. It's this game-changing innovation, coupled with the passionate and forward-thinking culture, that makes Tesla exceptionally special to me.

Thank you for considering my application, and I am looking forward to hearing back from the team!

Sincerely,

Andi Zhou