

ANDI ZHOU

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Dear Hiring Manager at Jacobs,

I am writing to express my strong interest in the Computational Fluid Dynamics (CFD) Engineer position at Jacobs. With a Master's degree in Aerospace Engineering specialized in Computation & Thermo-Fluid from the University of Michigan, and hands-on experience in fluid system design, CFD modeling, and analysis, I believe I am well-equipped to contribute meaningfully to your team.

While my time in the industry may appear shorter compared to some seasoned candidates, the depth, outcomes, and intensity of my internships, coupled with my unwavering passion for fluid dynamics, have equipped me with a skill set I'm confident can rival those with longer periods of industry exposure.

At Zoox, I revived a coolant fluid system test stand that was stagnant for 2 years in just 9 weeks. 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.

Joining Jacobs presents an exciting opportunity to apply my skills and knowledge in a setting that emphasizes innovation, collaboration, and global impact. I am deeply committed to bringing my expertise to address the various challenges within the tunneling projects and collaborating across the global team to drive success.

Thank you for considering my application. I look forward to the possibility of contributing to Jacobs and am available at your earliest convenience for a conversation.

Sincerely,

Andi Zhou