Evidence of Excellence for Tesla's Thermal Systems Aerodynamicist Position

As a master’s student in Aerospace Engineering at the University of Michigan Ann Arbor, I believe my academic and industry experiences align perfectly with the requirements of the Thermal Engineer position.

During my internship at Zoox Inc., I took charge of a stagnant coolant flow-mapping test rig for the L5 vehicle motor and battery cooling system. Within a span of just 9 weeks, I developed timelines, procured components, and led the project from an empty frame into actively outputting critical flow data for the team. This data includes pressure drops across each thermal component and flowrate through different flow branches with respect to different valve positions and pump duty cycle. I tested 175 different system configurations, extracting experimental data that led to design recommendations capable of potentially improving the system flow rate by 7.5%. From this experience, I became familiar with thermal testing procedures within the automotive industry, and have become adept at operating various pressure sensors, flowmeters, and DAQ software (IPEMotion). In addition, I innovated by devising an automation script in VBS (Visual Basic Script) which automatically changes pump duty cycle and valve positions as a function of time, slashing testing duration for my team from the initial 6 hours down to just 30 minutes.

Tesla is known for pioneering advancements and setting industry benchmarks, and I believe my proven track record at Zoox offers a synergistic match. I am excited to integrate my experiences, knowledge, and work ethics into the ambitious goals set forth by Tesla's thermal engineering team.