

January 9, 2025

Kellie Boone
Horton
2565 Walnut Street
Roseville, MN 55113

Dear Kellie Boone,

I'm writing to apply for a Mechanical Test Engineer position at Horton. I've learned about the interesting work done at Horton through the University of Minnesota's FSAE team, who I've been closely mentoring. As a recently graduated mechanical engineering student, I have always been attracted to problem solving and I'm excited to continue developing my skills. Through my FSAE and professional experiences, I have demonstrated my ability to tackle complex problems by leading design and testing processes that addressed critical issues. I would appreciate an opportunity to bring this experience to your team! I'm confident that my diverse technical knowledge, leadership skills, and design experience would make me a strong candidate for a Mechanical Test Engineer role at Horton.

During my time on Temple University's Formula SAE team, TFR, I've displayed my passion for problem solving and learning by spearheading projects in a variety of vehicle subsystems. While working on the systems integrations sub-team, I designed and fabricated the entire vehicle wiring harness to integrate the new MoTeC ECU platform. I worked directly with the powertrain team to set timing and calibrate engine sensors inside the M1 Tune software which further validated the harness. Furthermore, I collaborated with my team at the chassis dyno to create a baseline volumetric efficiency calibration for the EFI, (electronic fuel injection), system. The final dyno plots showed an increase of roughly 3 hp and 3 ft-lb of torque in the mid rpm range (7-10k); making the engine deliver more consistent and drivable power. This resulted in our team placing 15th out of 120 teams at the 2024 global FSAE competition, breaking the school record by 9 places.

The Mechanical Test Engineer position offers an opportunity to apply and develop skills in mechanical and electrical systems while contributing to the cooling solutions industry. With my hands-on experience designing, testing, and analyzing complex systems, I am confident that I would succeed in this role. By selecting me for this position, Horton would gain a dedicated team member who is eager to innovate and grow along with the company.

I would appreciate a chance to further discuss my qualifications in person or over the phone. Please don't hesitate to reach me at yak108@outlook.com or 570-533-6951. Thank you for your time and consideration!

Sincerely,

Jakob Werle