Jakob Werle

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Education

Temple University **Philadelphia, Pennsylvania**
Bachelor of Science in Mechanical Engineering *Graduated August 2024*

Technical Skills

- *Design Tools*: SOLIDWORKS, Fusion 360, Rapid Harness, Flux PCB, 3D scanning, GD&T, DFM
- *Analysis*: MS Excel, Python, MATLAB, EFI Calibration, Tolerance Stacking
- *Production*: HAAS CNC machining, TIG welding, wiring harness construction

Professional Experience

ANZE Suspension **Jupiter, Florida (Remote/Traveling)**
Junior Race Engineer / Technician *May 2022 – Present*

- Quantified vehicle behavior by debriefing driver on handling characteristics through cornering phases
- Analyzed time-distance plots, lap charts, & histograms to pinpoint performance gaps and assess impact of vehicle parameters on driving behaviors using MoTeC & AIM telemetry software
- Precisely measured, logged, & adjusted vehicle setup parameters in intense, time critical environment

NDI Engineering **Thorofare, New Jersey**
Mechanical Engineer I *June 2022 – June 2024*

- Oversaw the completion of a 35 drawing GD&T package by coordinating deadlines with team members, ensuring compliance with military specifications, & approving finished prints before final sign off
- Spearheaded drawing production & tolerance stack analysis for large-scale technology development on Naval vessels
- Developed destructive test methods for inserts in composite structures using fixtures designed & validated with FEA
- Provided engineering support to technical manual development team

Temple Formula Racing FSAE **Philadelphia, Pennsylvania**
Systems Integration Engineer / Senior Advising Member *Sept 2023 – May 2024*

- Contributed to the team placing 7th in design & 15th overall out of 120 teams at the 2024 FSAE Michigan competition
- Developed modular test bench to prototype race car pneumatic paddle shifting system, which won 3rd place in Temple College of Engineering senior design contest
- Designed and constructed full vehicle wiring harness using Rapid Harness software that integrates ECU, CAN bus, & data from 20+ sensors, which closely aligns with military specifications
- Collaboratively developed baseline engine calibration by monitoring engine diagnostics to resolve idle instability & throttle response issues while track-tuning
- Implemented vehicle setup, data analysis, and driver training procedures to establish data-driven team performance baselines

President / Chief Engineer *June 2021 – June 2022*

- Acted as cross-functional leader to manage the design, fabrication, and testing of 7 vehicle subsystems, consisting of 50+ members; using *TeamGantt* software
- Strategized with business team to expand the $75,000 team budget by obtaining company partnerships
- Redesigned and machined wheel assembly parts, reducing component mass by 15%, cutting material usage by 132 cubic inches, saving 20+ hours of machining time, and yielding reusable tooling and fixtures

Mishimoto **New Castle, Delaware**
Design Engineering Intern *May 2021 – August 2021*

- Linearized boost response in Boost Control Valve by testing re-profiled valve needles on Flow Bench
- Reverse engineered radiators, boost-control valve, & charge pipes and included Design for Manufacturing features
- Recreated virtual test-fitting environment by 3D-scanning engine bay with FARO Arm
- Modeled modular tow-hook using configurable SOLIDWORKS file structure

Credentials

- Certified SOLIDWORKS Associate (CSWA) - Mechanical Design *May 2020*
- Certified SOLIDWORKS Associate (CSWA) - Simulation *April 2022*
- SCCA (Sports Car Club of America) Regional Scrutineer License *June 2023*
- Eagle Scout - Boy Scouts of America *August 2018*
- Level 1 Alpine Certification - Professional Ski Instructors of America (PSIA) *February 2021*