Jakob Werle

Forest Lake, Minnesota

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EDUCATION

Temple University

Bachelor of Science in Mechanical Engineering

Philadelphia, Pennsylvania

Graduated – Summer 2024

Professional Experience

ANZE Suspension

Junior Race Engineer

Jupiter, Florida (Remote/Traveling)

May 2022 – Present

* Assisted lead engineer in spotting & data collection in pit box during race sessions
* Debriefed drivers post-race to quantify vehicle handling through turn phases
* Analyzed lap data using MoTeC & AIM telemetry software and video footage
* Developed suspension adjustments for F1600 & F2000 cars utilizing driving data & debrief feedback
* Performed string-alignments, shock set-downs, and other setup procedures in time critical setting

Temple Formula Racing

Systems Integration / Senior Advising Member

Philadelphia, Pennsylvania

Sept 2023 – May 2024

* Contributed to the team placing 15th overall and 7th in design at 2024 FSAE Michigan competition, out of 120 teams
* Developed test bench to prototype race car 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
* Solved reliability failures by analyzing the current and voltage draw of critical electrical components
* Assisted in initial volumetric efficiency engine calibration through MoTeC ECU lambda readings
* Implemented vehicle setup, data analysis, and driver training procedures to establish team performance baselines

President / Chief Engineer

June 2021 – June 2022

* Managed 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
* Promoted team inclusion by organizing both fundamental & advanced level welding, CNC, and design workshops

Suspension Lead Engineer

June 2020 – June 2021

* Spearheaded major suspension design overhaul from 13” to 10” wheel platform
* Wrote python code to optimize vehicle handling by analyzing vehicle dynamics and tire behavior
* Designed suspension linkages and wheel assemblies to achieve precise kinematic parameters using SOLIDWORKS
* Fabricated wheel assemblies using Fusion360 CAM & HAAS CNC mill & lathe

NDI Engineering

Mechanical Engineer I

Thorofare, New Jersey

June 2022 – June 2024

* Administrated completion of drawing package for entire department by tracking production in MS Excel and communicating with customers
* Prepared GD&T drawings for temporary system alteration of Ohio & Columbia class submarines using SOLIDWORKS
* Performed tensile and torsional mechanical testing threaded inserts and gimbal assembly
* Provided engineering support to technical manual development team

Mishimoto

Product Design Engineering Intern

New Castle, Delaware

May 2021 – August 2021

* Reverse engineered radiators, boost-control valve, & charge pipes to improve cooling performance & power
* Validated strength of modular tow-hook using SOLIDWORKS simulation
* Communicated directly with vendors to integrate manufacturing criteria into designs

Technical Skills

* Software: SOLIDWORKS, Fusion 360, Flux PCB, Rapid Harness, Python, Github, MATLAB, MoTeC EFI calibration
* Hardware: HAAS CNC machining, TIG welding, general fabrication, wiring harness construction, 3D scanning

Credentials

* Certified SOLIDWORKS Associate (CSWA) – Mechanical Design
* Certified SOLIDWORKS Associate (CSWA) – Simulation
* Regional Scrutineer License – SCCA (Sports Car Club of America)
* Eagle Scout – Boy Scouts of America
* Level 1 Alpine Certification – PSIA (Professional Ski Instructors of America)

May 2020

April 2022

June 2023

August 2018

February 2021