

# JAKOB WERLE

Forest Lake, Minnesota

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## EDUCATION

### Temple University

*Bachelor of Science in Mechanical Engineering*

Philadelphia, Pennsylvania

*Expected Graduation – Summer 2024*

## PROFESSIONAL EXPERIENCE

### ANZE Suspension

Jupiter, Florida (Remote/Traveling)

*Junior Race Engineer*

*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 FSAE

Philadelphia, Pennsylvania

*Systems Integration / Senior Advising Member*

*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

Thorofare, New Jersey

*Mechanical Engineer*

*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

New Castle, Delaware

*Design Engineering Intern*

*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, Git, MATLAB, MoTeC EFI calibration
- *Hardware:* HAAS CNC machining, TIG welding, metal fabrication, wiring harness construction, 3D scanning

## CREDENTIALS

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