

AIDEN ZHANG

Melbourne, VIC

Summary

Accomplished Senior Mechanical Design Engineer with over 9 years of expertise in mechanical design, structural analysis, and advanced manufacturing. Proven track record in streamlining engineering workflows through 2D/3D CAD, FEA, and API automation. Delivered 120+ bespoke vehicle body projects from conceptualization to final production within the last 24 months. Expert in ensuring full compliance with Australian Standards while leading cross-functional teams to drive process innovation.

Experience

Senior Mechanical Design Engineer

Cooks Body Works, Melbourne | May 2023 - Present

- Project Leadership: Direct the design and technical management of truck and utility vehicle bodies, ensuring 100% compliance with Australian engineering standards.
- High-Volume Delivery: Successfully executed the end-to-end design and delivery of 120+ specialized vehicle bodies tailored for diverse industrial applications.
- Production Oversight: Managed in-house manufacturing stages to ensure every build aligned with contractual quality benchmarks and strict delivery timelines.
- BOM & Supply Chain Coordination: Created and managed comprehensive Bills of Materials across custom vehicle body projects, ensuring accurate component specification, cost control, procurement readiness, and smooth production handover.
- Structural Validation: Conducted rigorous FEA simulations to verify structural integrity, significantly enhancing product safety and field reliability.
- Innovation & R&D: Spearheaded prototype development and validation testing, optimizing design cycles through data-driven field insights.
- Client Relations: Provided post-sales engineering consultations, delivering bespoke technical solutions and ongoing operational support.

Senior Mechanical Design Engineer

Gen Care Services, Melbourne | Jan 2022 - Apr 2023

- Industrial Engineering: Designed generator auxiliary systems and industrial acoustic enclosures, utilizing FEA to meet stringent safety and noise standards.
- Workflow Optimization: Orchestrated project timelines and manufacturing workflows to maximize throughput and ensure on-time project completion.
- Precision Modeling: Developed comprehensive 3D models and detailed production drawings to maintain high-precision manufacturing outcomes.
- Supply Chain Management: Collaborated on material procurement and supplier selection while maintaining a standardized company design library.

Mechanical Design Engineer

Westberg/Ultralift, Melbourne | Mar 2019 - Nov 2021

- Product Development: Engineered specialized enclosures and lifting mechanisms for high-end audiovisual equipment.
- Manufacturing Efficiency: Optimized production documentation and manufacturing processes to reduce overhead and improve cost-efficiency.
- Technical Support: Provided advanced technical assistance to the sales department and led internal SolidWorks training sessions for the team.

Project Engineer

Cheltenham Sheet Metal, Melbourne | Jan 2017 - Feb 2019

- Systems Design: Developed complex ducting systems by translating architectural blueprints into production-ready designs using AutoCAD and CAMduct.
- Account Management: Managed multiple concurrent projects, including precise cost estimation and stakeholder communication.

Core Skills

- Technical Design: Mechanical Design, SolidWorks, Solid Edge, AutoCAD, CNC Programming.
- Analysis & Automation: Finite Element Analysis (FEA), API Development, MATLAB.
- Project Management: End-to-end Project Lifecycle, Supplier Procurement, Quality Assurance.
- Soft Skills: Bilingual (English & Mandarin), Cross-functional Leadership, Technical Training

Education

- Master of Engineering (Mechanical), The University of Melbourne, Australia, 2016
- Certificate IV in Business
- Diploma of Interpreting (English and Mandarin)

Portfolio

Fast body design [video](#)

Fast door design [video](#)

Entry Gate demo [video](#)

[MORE CAD DEMO](#)