Grace Mata Futi

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SUMMARY

Experienced Mechanical Engineer with a strong background in design engineering, machine design, and mechanical engineering. Proficient in CAD software, including SolidWorks and AutoCAD 2D drafting. Demonstrated expertise in project management, product design, and development, with a proven track record of successful projects in the automotive industry. Skilled in Finite Element Analysis (FEA), Prototype development, Jigs & Fixture design and reverse engineering. Excels in strategic planning, team leadership, and detailed execution, ready to bring a wealth of experience and a fresh perspective to your Company.

EXPERIENCE

AeroklasDuys, ***Principal Engineer***
2022 – Present

Responsible for planning, design and development and overseeing projects to ensure they are completed in a timely fashion and within budget. Plan and designate project resources, prepare budgets, monitor progress, coordination, implementation, execution, control and completion of projects ensuring consistency within company strategy, commitment and goals and keep stakeholders informed the entire way.

Key Responsibilities

• Plan and implement engineering activities.
• Manage engineering department including research and development (R&D) workshop.
• Manage engineering budgets.
• Determine engineering department goal to meet the KPI.
• Liaise with customers and maintain customer relationships.
• Implement process improvement.
• Finite Element Analysis (FEA).
• Product Design.
• Prototype Development.
• Implemented Jig / fixture / tooling design to support industrialization of product.
• Project Management.
• Mechanical Design.
• Reverse Engineering.
• FMEA reviews and Updates.
• Work Instruction reviews.
• Fitting Instruction reviews and Updates.
• Training,
• Mentoring,
• Leadership

Projects

- Design and development of Rollover Protection Systems (ROPS).
  - Isuzu Double Cab and Single cab 2022 model.
  - Ford Single Cab 2013 model.
  - Ford Single Cab and Double cab 2023 model.
  - Mercedes Sprinter Bus 23 Seaters.
  - Mahindra Pick Up Single Cab.
  - Toyota Quantum 14 Seaters.
- Design and development of styling products in line with OEM requirements.
  - Universal Nudge bar to fit Toyota, Ford, Isuzu and Amarok.
  - Rear Bumper and Tow bar for Mahindra Double and Single cab.
  - Drop Side for Mahindra Single cab.
  - Styling bar for Isuzu Double and Single cab.

Achievements

• From September 2024 to July 2025, I successfully designed and developed Drop side, Rear bumper and Tow bar for Mahindra Pick Up single cab.
• From 2022 to June 2025, I successfully designed and developed 6 ROPS system for different Vehicles which get used in the Mining sector to transport their personnel.
• From 2022 to 2025, I designed and developed 2 styling products which were launched into OEM Automotive sector

AeroklasDuys, ***Product Design Development Engineer***
2018 – 2022

Responsible for the design of new products and modification of existing products if necessary to comply with customer specifications, prototype development as well as conduct research and analysis and come up with new products ideas to meet Market expectations. I industrialize products using either available facilities / capacity or most efficient alternatives and implement Jig / fixture / tooling design to support industrialization of product.

Key Responsibilities

• Product design.
• Project management from planning to implementation.
• Prototype development
• FEA
• jigs and fixture design from conceptualization to industrialization
• Create Bill of material,
• Create Process Flow Chart.
• Create Fitting instructions
• Engineering drawing with GD&T
• Design Failure Mode and Effect Analysis (DFMEA),
• PFMEA & Control plan.
• APQP
• Reverse Engineering
• Mechanical design Engineering
• SolidWorks,
• AutoCAD 2D drafting,

Projects

- Design and development of Rollover Protection Systems (ROPS).
  - Mahindra Pick Up Double Cab.
  - Nissan Navara Double Cab.
  - Nissan Navara Single Cab.
- Design and development of styling products in line with OEM requirements.
  - Styling bar for Ford Ranger Double and Single cab.
  - Under Body Protection for Nissan Navara in Australia.

Achievements.

• In 2021 I successfully design the underbody cover transfer for Nissan Navara double and prototype development, FEA analysis and fitting instruction as per customer specifications. Design was approved by Nissan engineering team in Australia after passing the durability and vibration test.

• In 2022 I successfully design and developed the rollover protection structure for Isuzu RG06 dual and single Cab to be used in Mine. As a result, the project was successfully done within a definite budget and timing.

Duys Components Manufacturing, ***Junior Mechanical Engineer***
2016 – 2017

Assisting the engineering team with jigs and fixture design from conceptualization to industrialization, prototype development, reverse engineering, creating bill of materials, creating fitting instructions, creating manufacturing drawing with GD&T detail, creating process flow chart, liaise with suppliers, providing technical support to the shop floor and to the boilermaker in R&D workshop, conducting on job training to the operators.

EDUCATION

Durban University of Technology
Bachelor of Technology in Mechanical Engineering • 2016 - 2017

Durban University of Technology
National Diploma in Mechanical Engineering • 2012 - 2016

C.S Diyavanga
High School Diploma - Class of 2010

LICENSES & CERTIFICATIONS

Chartered Member (Engineering Technologist)
Engineering New Zealand Te Ao Rangahau • Issued Jun 2025

Professional Engineering Technologist
Engineering Council of South Africa • Issued Aug 2024

Certificate Member
SAIMechE • Issued Apr 2023

SKILLS

- MS Office Suite Packages.
- Finite Element Analysis (FEA),
- SolidWorks.
- AutoCAD 2D drafting.
- Internet.
- Email.
- Microsoft Teams.
- APQP.
- Verbal and written communication.
- Design Failure Mode and Effect Analysis (DFMEA).
- Mechanical Design.
- Product Design.
- Prototype Development.