Yerman J. Merel G.

77933 Lahr, Germany **I** (49) 175 1408223 **I** ymerel_02@outlook.com **I** D-Visa working permission **I** 25 Years Old

EDUCATION

Technology University of Panama (Status H+) Panama City, Panama
Bachelor of Science, Mechanical Engineering Jan 2018 – Dec 2024
With a minor in Dynamic Systems and Automation.
Relevant Courses: Numerical Computations for Mechanical Engineers, Analysis and Design of feedback control systems

WORK EXPERIENCE

Herrenknecht AG Schwanau, Germany
Project Engineer Jan 2025 – Jul 2025

- Supervised transport, assembly, commissioning, operation, and disassembly of **Tunnel Boring Machines (TBMs)** and **peripheral systems**, ensuring compliance with **DIN/ISO standards** and **safety regulations**.
- Coordinated with **multidisciplinary teams** to meet **project specifications**, perform **risk assessments**.
- Utilized **Creo Parametric**, **SolidWorks**, and **PDM systems** (**Windchill**) to review mechanical layouts and verify conformity with technical drawings.
- Produced **technical documentation**, inspection reports, and provided engineering input for **design improvements** and **cost optimization**.

China Railway Tunnel Group (CRTG) Panama City, Panamá
Design Mechanical Engineer Aug 2024 – Jan 2025

- Designed **thermo-fluidic systems** using **3D CAD** tools (**Inventor**, **Creo**, **SolidWorks**) and validated designs through **FEM**/**CFD simulations** in **ANSYS**.
- Conducted **testing, measurements, static/dynamic analyses**, and technical validation of **mechanical assemblies**.
- Prepared **technical documentation**, including **schematics**, **BOMs**, and **engineering reports**, using **PDM systems** (**Windchill**).

UNIVERSITY PROJECTS

Dynamic Modelo of Vortex Induced Vibration Wind Turbine
Research
• Developed a dynamic model of an oscillating system subjected to wind-induced vortices, involving mathematical formulation, modal analysis, and comparison of theoretical results to achieve responses with acceptable accuracy.

Dynamic Seismic Validation of a Diesel Engine Support Structure
Structural Design
• Validated an analytical diesel engine mount model through FEA (INVENTOR) comparison, identifying natural frequencies and applying Duhamel's integral with processed seismic spectra (Python) to evaluate dynamic response.

COURSES & TRAININGS

Design of Thermofluidic System
University Technology of Panama (Status H+, Recognized) (Nov 2023)

Fluid Technology, Hydraulic and Lubrication
HERRENKNECHT AG (Jun 2025)

ADDITIONAL

Technical Skills: Advance in CAD (SolidWorks, AutoCAD, Inventor, PTC Creo), ANSYS, Microsoft Office

Programming Skills: Proficient in Python, MATLAB, JavaScript

Languages: Spanish (Native); English (Full professional proficiency); German (Elementary Proficiency)

Awards: Finalist in the Scientific Initiation Conference (Sep 2023)