

DANI ABOU ZAMEL

Mechanical Design Engineer

LinkedIn Profile

daniabouzamel.com

daniabouzamel@gmail.com

Experience

Mechanical Design Engineer

Feb 2024 - Present

Camerobotics, Beirut

- Lead mechanical design of professional robotic cinematography systems, tracks, bases, and motion rigs
- Own full product lifecycle, concept development, CAD architecture, structural validation, prototyping, and CMF decisions
- Perform FEA and tolerance stack analysis to ensure rigidity, repeatability, and smooth dynamic performance
- Deliver complete manufacturing packages, drawings, GD&T, BOMs, and assembly documentation
- Work directly with machining suppliers and fabricators to optimize manufacturability, cost, and reliability
- Produce product visuals and technical presentation materials for clients and marketing

Product Design and Development Engineer

Nov 2023 - Feb 2024

MakeReal, Beirut

- Designed production ready assemblies in SolidWorks balancing performance, cost, and aesthetics
- Created full manufacturing documentation for CNC machining, sheet metal, and additive manufacturing
- Built and tested functional prototypes to validate user interaction and mechanical performance
- Conducted FEA and CFD simulations for structural and thermal verification
- Coordinated with suppliers to refine designs for efficient, cost-effective production

Robotics Safety and Hardware Development Intern

May 2023 - Nov 2023

BMW Group, Munich

- Developed and prototyped STR industrial robot components using additive manufacturing
- Redesigned chassis components to reduce cost and improve production reliability
- Configured PLC safety logic using Safety Designer for motion control compliance
- Executed functional validation testing, including dynamic braking and safety response verification
- Automated repetitive testing workflows using Python, increasing testing speed by up to 250%

Mechanical Engineer intern

Dec 2021 – Feb 2022

Maserati Lebanon (Bazerji Motors)

- Prepared structured technical service reports documenting diagnostics, repair procedures, and system conditions
- Utilized OEM certified diagnostic systems to reduce fault identification and troubleshooting time by 20 percent
- Performed mechanical and electromechanical fault analysis, identifying root causes and recommending corrective actions

Education

BEng Mechanical Engineering

Holy Spirit University of Kaslik - USEK, Lebanon

Courses and Certifications

Design Principles for 3D Printed Parts

PrusaLab, 2025

3D Modeling for Mechanical Design Using Inventor

Autodesk, 2022

Huawei AI Program

Huawei, 2021

Skills

Product Development: Concept development, requirements definition, design strategy, prototyping, design iteration, DFMA

Mechanical Design & CAD: SolidWorks, Inventor, CATIA, mechanism design, GD&T, tolerance stack-up, material selection

Manufacturing: CNC machining, sheet metal design, casting, injection molding, additive manufacturing, rapid prototyping

Simulation & Analysis: FEA (static, modal), CFD, design validation, failure analysis

Electromechanical: Microcontrollers, embedded systems integration, PLC fundamentals, basic PCB design (KiCad), system integration

Technical & Operations: Engineering drawings, BOM creation, component sourcing, supplier coordination, technical documentation, product visualization

Languages: Arabic (native), English (fluent), French (fluent)

Volunteering

Saint Vincent De Paul

2015 - 2023

Organized community events, coordinated logistics, and led fundraising initiatives supporting social programs