Muhammad Sameer Sajid

Mechanical Design & Engineering Analytics

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PROFILE

Mechanical design consultant with 100+ engineering engagements since 2020 and graduate training in analytics. Develop assemblies, production drawings and bills of materials, validate design decisions with calculations and data, and communicate trade-offs to clients and suppliers.

EXPERIENCE

Independent Mechanical Design Consultant Mar 2020 - Present
Mecharade Engineering Services | Project-based

- Delivered 100+ engineering engagements by translating requirements into SolidWorks assemblies, manufacturing drawings, bills of materials and technical reports.
- Coordinated six CAD, FEA and CFD contractors and reconciled drawings, models and bills of materials through supplier and client reviews.

Commercial & Industrial Designer (Mechanical) Jan 2026 - Present
Mercor | Independent contractor

- Evaluate AI-generated CAD, drawings and calculations against engineering requirements, then document gaps and recommend corrective actions.

Research Associate & Engineering Laboratory Instructor Sep 2023 - Jul 2024
Capital University of Science & Technology | Islamabad, Pakistan

- Supported prototype integration and physical testing. Prepared demonstrations and taught machining, metrology and manufacturing across five engineering laboratories.

SELECTED PROJECTS

- HVAC quick-connect coupling: compared two layouts against a 47.8 mm² minimum flow-area design target and documented clearances and prototype checks.
- Double-reduction gearbox: incorporated client redlines across three revisions and reconciled the assembly, exploded views, bill of materials and detail drawings.
- FDM material evaluation: compared Abaqus simulations with experimental data, with a reported ABS tensile stress RMSE of 1.21 MPa for one parameter set.

EDUCATION

Master of Management in Analytics Expected Aug 2027
Ivey Business School, Western University

B.Sc. Mechanical Engineering 2019 - 2023
Capital University of Science & Technology

TECHNICAL SKILLS

SolidWorks, AutoCAD, Creo, Fusion 360, GD&T, DFM/DFA, BOMs, ANSYS Mechanical, Abaqus, MATLAB, R, SQL, MongoDB, and Excel.