Zara Hesari

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Beverly Hills, CA

Mechanical engineer with 3 years of experience in the medical devices and renewable energy sectors. Currently pursuing a M.S. in Industrial Design.

Education

Sep 2023 – Jun 2026
M.S. Design & Engineering
Polytechnic University of Milan, Italy
Thesis explores the intersection of semiotics and design ethics.

2017 – 2020
B.S. Mechanical Engineering
University of California, Irvine CA, USA
Led a senior project to design and test a liquid nitrogen cooling system, achieving a 50% improvement in power density control and ensuring compliance with Air Force Research Laboratory requirements.

Jun – Sep 2019
Student Researcher
Internal Combustion Engine Lab
Munich University of Applied Germany
Led a senior project to Enhanced the MAN Diesel propulsion system's performance, implementing after-treatment systems to reduce environmental pollutants, meeting EU environmental standards.

Experience

May 2023 – July 2023 / ReCarbon Inc. / Fremont, CA
Prototype Mechanical Engineer

- Engineered high-temperature pipe flanges using nickel-based alloys to meet ASME standards for applications up to 1500°C, achieving 100% compliance with design and safety requirements.
- Prototyped precision components using 3D laser metal sintering technology, reducing manufacturing lead time by 25%.
- Performed machining operations using manual lathe and mill, achieving a defect-free fabrication rate.

Jan 2021 – May 2023 / Abbott Laboratories / Santa Clara, CA
Associate Mechanical Engineer

- Led the redesign of Alinity h-series blood analyzer instruments, optimizing thermal and vibration performance to improve throughput efficiency by 20%.
- Conducted FEA using ANSYS, validating structural performance and reducing prototype iterations by 30%.
- Spearheaded the creation and optimization of over 100 GD&T-compliant part designs, enhancing manufacturing precision and reducing assembly errors by 10%.
- Reduced production costs by 12% through material optimization for injection molding and sheet metal components.
- Managed two accelerated reliability projects as a technical lead, extending product lifecycle by 15% and achieving on-time project delivery.