

Mr. Behshad Ghazanfari

MECHANICAL DESIGN ENGINEER

SUMMARY

I am a seasoned Mechanical Design Engineer with a rich background spanning 11 years in product design, encompassing research, development, and installation. My proficiency extends to project management, successfully steering numerous complex projects to fruition. I excel in utilizing ANSYS for CFD and FEA analysis, SolidWorks for CAD modeling, and Python for coding. Renowned for my motivation, talent, organization, and dedication to meeting deadlines, I possess strong teamwork skills and a natural problem-solving ability.

EXPERIENCE

SENIOR MECHANICAL DESIGN ENGINEER

Nov 2019 – Present

Megapascal – Pooyan Negin Jam (PNJ), Isfahan, Iran

Responsibilities:

- Led a team of five engineers in innovatively reverse engineering and manufacturing pioneering products, boosting company revenue by over 45%. Secured a significant five-year contract with an intermediary supply company for a petrochemical site.
- Led a project involving 3D scanning, CAD modeling, and Computational Fluid Dynamics (CFD) analysis of impaired impellers and diffusers, ensuring adherence to API-617 standards. Conducted Finite Element Analysis (FEA) for feasibility, identified materials, and implemented balancing methods. Successfully reverse engineered a damaged centrifugal compressor impeller and diffuser using tools like CFturbo, SolidWorks, CFX, and FLUENT. Managed meticulous material selection, outsourcing, balancing, testing, and seamless device installation.
- Expanded and improved products based on customer feedback, analysis, and cost considerations, enhancing the company's market presence.
- Played a key role in strategic direction, development processes, and achieving short-term and long-term goals.
- Negotiated with potential clients and pursued them to sign contracts as a sales engineer.
- Implemented of industrial standards such as API 616, API 617, ISO 2768, ASME Y14.5, and VITA48 in design process that helped the company product verified by standard organization

Company Services: Design and prototyping of mechanical parts and equipment (Electrical Enclosure & Turbomachinery) in oil and gas, petrochemical, Telecommunication, Automation and steel industries.

CONTACT

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LinkedIn: [Linkedin Profile](#)

Location: Shahin Shahr, Isfahan, Iran

EDUCATION

Master's Degree
Aerospace engineering (Propulsion)
National Aviation University
Ukraine
Sep 2010 – Feb 2012

Bachelor's Degree
Aerospace engineering (R&M)
National Aviation University
Ukraine
Sep 2006 – Jun 2010

SKILLS

Technical Skill:

- Computational Fluid Dynamics (CFD)
- Finite Element Analysis (FEA)
- CAD Modeling (2D, 3D)
- Turbomachinery Design
- Reverse Engineering
- Prototyping
- Environmental Tests (Vibration, Shock, Thermal Shock)
- Project Management
- Material Selection
- FMEA (Mechanical Design)
- GD&T (DFMA)
- Software Development

Soft Skill:

- ANSYS FLUENT & CFX
- ANSYS Mechanical
- SolidWorks (Proficient)
- Siemens NX / Solid Edge / CATIA
- Matlab
- Python
- C++

LANGUAGES

- 1) English – Fluent
- 2) Russian – Fluent
- 3) German - Beginner
- 4) Persian – Native

MECHANICAL SOFTWARE DEVELOPER

Mar 2021 – Jul 2023 (After hours work)

Self-employed, Isfahan, Iran

- Developed Behshad Gas Turbine 1.0: Comprehensive gas turbine design software for thermodynamic and aerodynamic calculations. (Axial Compressor, Combustion Chamber, Axial Turbine)
- Automated initial data calculation, streamlining design processes and generating 3D models/CAD files.
- Facilitated seamless transfer of meticulously prepared gas turbine parts data through Excel files.

Software video demo: [YouTube](#)

MECHANICAL DESIGN ENGINEER AND CONSULTANT

May 2016 – Nov 2019

Telecommunication research Institute of Isfahan University of Technology, Isfahan, Iran

Responsibilities:

- Designed and checked electrical enclosures, reducing manufacturing costs through CAD, FEA, and CFD analysis.
- Efficiently communicated technical issues with clients, establishing an effective communication system.
- Developed and maintained project plans, contributed to new production processes, and advised on tooling, reducing prototyping time and costs.
- Arranged and designed fixtures and necessary preparations for conducting environmental tests such as vibration, impact, thermal, thermal shock.
- Designed and prototyped a high-performance industrial computer enclosure, efficiently dissipating 400 watts in a confined space. Successfully withstood random and harmonic vibrations, achieving an IP67 protection rating. This success played a key role in securing investment and subsequent agreements for similar projects

Institute Services: Design and Prototyping of electromechanical, electrical, communication equipment

PREVIOUS EXPERIENCE

AIRCRAFT MAINTENANCE ENGINEER (Full Time), Bravo Airways, Kyiv, Ukraine	2012 - 2014
MECHANICAL ENGINEER (Part Time – Student Work), NVDS, Kyiv, Ukraine	2010 - 2012

CERTIFICATION

- 1) DESIGN, CALCULATION AND ANALYSIS OF AIR CONDITIONING, LIFE SUPPORTING AND ANTI-ICING SYSTEMS OF CIVIL AIRCRAFTS
Issued Nov 2010, National Aviation University (NAU)
Kyiv, Ukraine
- 2) METAL ELECTRODEPOSITION: PRINCIPAL AND APPLICATION
Issued Mar 2019, Isfahan University of Technology
Isfahan, Iran

PUBLICATION

NUMERICAL STUDY OF CAMBER AND STAGGER ANGLE EFFECTS ON THE AERODYNAMIC PERFORMANCE OF TANDEM-BLADE CASCADE

Elsevier · Mar 1, 2018

[Read More](#)

AWARDS AND RECOGNITION

- Recommendation Letter from Professor Yuri Treshenko (Director of Propulsion Institute of National Aviation University)
- Certificate of Excellence for Outstanding Research at the Telecommunications Research Institute of Isfahan University of Technology
- Certificate of Appreciation for Exemplary Service at Bravo Airways
- Award for Best International Student at National Aviation University in 2012.