

Mohammad Sarshar

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PROFESSIONAL SUMMARY

Multidisciplinary scientist-engineer with a Ph.D. in Bioengineering and extensive expertise in optics, instrumentation, quantitative imaging, and precision calibration. Demonstrated track record in bridging technical execution with strategic leadership, regulatory compliance (ITAR/EAR), and innovative problem-solving across complex, multidisciplinary projects. Deeply adaptable across industries, positioned for a strategic, high-impact technical leadership role within innovation-driven aerospace or defense sectors. Eligible for U.S. security clearance.

CORE COMPETENCIES

- Optical Instrumentation & Precision Calibration
 - Quantitative Imaging & Signal Processing
 - Finite Element Modeling & Mechanical Design
 - Multidisciplinary Project Management
 - Agile, Scrum & Strategic Planning
 - Image Analysis & Machine Learning Applications
 - Engineering Feasibility & Risk Analysis
 - Regulatory Compliance (ITAR/EAR Familiarity)
 - Stakeholder Management & Communication
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KEY PROJECTS & ACHIEVEMENTS

Founder & Lead Consulting Specialist

Heler LLC – Buffalo, WY | Oct 2016 – Present

EV Battery Assembly Plant Development

- Led planning and deployment of two EV battery production lines.
- Initial output: 10–12 cells/hour; second phase: 50+ cells/hour.
- Managed team scaling from 4 to 180+; total project value: \$9M.

Optics & Imaging Systems for Aerospace/Scientific Use

- Designed and calibrated optical systems with sub-nanometer resolution.
- Integrated phase microscopy, active optical setups, and laser platforms.
- Applied imaging and signal processing in real-time instrumentation.

Vacuum Chamber Design for Space Instrument Testing

- Led design and calibration of a 1m³ vacuum chamber for aerospace instruments.
- Advised on mechanical design, materials, and sensor integration.

Photovoltaic Power System Consulting

- Delivered 200KW–4MW solar plant studies; budgets: \$300K–\$3M.
- Managed multidisciplinary teams for energy storage and grid-integration projects.

Compliance & Trade Advisory (ITAR/EAR & OFAC)

- Performed risk assessments on component sourcing & export strategies.

- Implemented design changes ensuring compliance with U.S. export laws.

Medical Device Feasibility & Platform Development

- Directed feasibility and production plans for surgical tools and imaging platforms.
- Budget range: \$600K–\$1.8M; managed cross-functional engineering teams.

Digital Health Platform: Pillcci

- Built Android app for medication and patient tracking, HIPPA and GDPR compliant.
 - Secured 1500+ beta users; \$600K development phase.
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EDUCATION

Ph.D., Bioengineering

University of California, Riverside (2008 – 2016)

M.S., Mechanical Engineering

Iran University of Science and Technology (2007 – 2008)

B.S., Biomedical Engineering

Amirkabir University of Technology (2003 – 2007)

TECHNICAL SKILLS

Python, C++, MATLAB, COMSOL, ANSYS, Zemax, ImageJ, Tableau, WordPress, Agile Tools (Asana, Trello)

CERTIFICATIONS & TRAINING

- Project Management (Agile, Scrum, PMP Prep – PMP Exam Target: 10/2025)
 - Machine Learning & Image Processing (Coursera, Applied ML, Deep Learning)
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INTELLECTUAL PROPERTY & RESEARCH

- 13 Publications; 155 total citations, 118 for top calibration paper
 - U.S. Patent App: Optical Micromanipulation & Interferometric Topography (2018)
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AFFILIATIONS & HONORS

- Member: SPIE, ACS, ASME, Biophysical Society, ASLMS
 - Awards: Dean's Fellowship, SPIE Scholarship, Lab Safety Honors
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Outside Interests

Aikido (Black Belt), Literature Enthusiast, Experimental Photography, Outdoor Trekking