

Ali Sotoodeh

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Professional Profile

Experienced engineer with a robust academic background, holding master's degrees in engineering and economics. Adept at leading projects, conducting research, and teaching engineering courses. Committed to fostering student success and contributing to the academic community. Skilled in integrating practical insights from industry experience into educational and research endeavors.

Education

The University of Texas at Arlington

Master of Science in Industrial Engineering

- Conducted heat transfer and heat sink design research.
- Published a research paper for scientific journals.
- Developed statistical modeling, data mining, engineering design, and optimization modeling research projects.

Loyola Marymount University

Master of Science in System Engineering

- Developed an energy-saving model for California's Efficient Lights Replacement Program.
- Created a Lean Manufacturing model to enhance Hubble Lighting's laboratories.

California Lutheran University

Master of Science in Quantitative Economics

- Developed an Economic Forecast Model for Small Populations.
- Authored studies on the relationship between religion and economic growth and the link between capital income taxes, oil prices, and economic growth.

Shaheed Sattari Aeronautical University

Bachelor of Science in Aeronautical Engineering

- Conducted research on new helicopter technologies.
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Academic Experience

North Central Texas College (NCTC)

Adjunct Faculty - Drafting and Design Technology

- **Spring 2024:** Taught Intermediate AutoCAD and Machine Drafting.
- **Fall 2024:** Taught Solid Modeling.
- **Spring 2025:** Teaching Machine Design.
- Developed comprehensive syllabi and course materials to align with college standards and industry practices.
- Utilized various teaching methods, including lectures and tutorials, to cater to diverse learning styles.
- Fostered hands-on learning experiences through project-based instruction.

Texas A&M University-Commerce

Adjunct Faculty

- **Spring 2025:** Teaching Computer-Aided Design (CAD).
 - Designed and implemented curriculum to equip students with industry-relevant CAD skills.
 - Engaged students with interactive assignments and real-world design challenges.
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Professional Experience

HED

Electrical Engineer

- Lead Project Discipline Team for small to large projects.
- Conducted code research and attended project meetings.
- Utilized CADD (BIM/Revit) for building electrical systems design.

HNM Systems (2022–2023)

Electrical Designer

- Designed underground power distribution lines, rebuilds, and upgrades.
- Conducted site surveys and developed engineering design drawings in AutoCAD.
- Performed structural and electrical analysis for overhead and underground distribution design.

HNTB, TX (2021–2022)

Engineer III

- Collaborated on lighting design for transportation and roadways.
 - Performed lighting calculations and created electrical connectivity plans.
 - Delivered QCQA evaluations using Bluebeam software.
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Publications

1. **3D Printable LED Heatsink Inspired by Firefly Wings**
 - Presented at ASME MSEC 2023. [Link to Publication](#)
 - Research focused on innovative heat dissipation methods.
 2. **Safety in Systems: A Comprehensive Literature Review of PHA, FMEA, HAZOP, and Fault Tree Analysis**
 - Published in ProQuest. [Link to Publication](#)
 - A detailed review of safety analysis methodologies in systems engineering.
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Skills

- Engineering Software: AutoCAD, Revit, MicroStation, AGI32, SolidWorks, Autodesk Inventor.
 - Analytical Tools: Statistical modeling, data mining, economic forecasting.
 - Teaching & Mentorship: Course design, student engagement, project-based learning.
 - Research & Development: Heat transfer, system optimization, safety analysis.
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Additional Contributions

- Published research in scientific journals and contributed to advancements in LED lighting and safety systems.
- Continuously engaged in professional development to stay updated with industry and academic advancements.