

TAMJID SHAFIQ

(337) 909-8108 | tamjid.shafiq1@louisiana.edu | [LinkedIn](#)

RESEARCH INTERESTS

Energy Efficiency, Renewable Energy Systems, Sustainability, Building Energy Modeling & Simulation, HVAC&R Systems, Process Optimization and Lean Manufacturing.

ACADEMIC POSITIONS

Graduate Research Assistant, Department of Mechanical Engineering August 2023 - Present
University of Louisiana at Lafayette Lafayette, LA

- Coordinate site visit meetings and site visits with the center director to ensure thorough energy assessments.
- Analyze annual utility bills and relevant information to baseline energy consumption patterns.
- Conduct site visits as a student leader to industrial and commercial facilities, averaging *3 per semester*.
- Generate technical reports with energy-saving projections aiming for at least *10-15% energy cost reduction* per facility.

Graduate Teaching Assistant, Department of Mechanical Engineering January 2023 - July 2023
University of Louisiana at Lafayette Lafayette, LA

- Delivered guest lectures for Environmental Engineering (MCHE 466), engaging *15+ students per session*.
- Train *5-10 undergraduate students* each semester to complete energy assessments, with 13 completed to date.

INDUSTRIAL EXPERIENCE

Mechanical Design Engineer, Walton Hi-Tech Industries PLC, Bangladesh Jul 2019-Dec 2022

- Spearheaded the design and development of *3 air conditioner models* for a New Product Introduction (NPI) initiative.
- Designed, prototyped, and implemented *15+ plastic and sheet metal* components, using DFM.
- Produced *15+ detailed 2D technical drawings* with GD&T standards for accurate manufacturing guidance.
- Collaborated with cross-functional teams to propose *4+ design modifications* through DFMEA.
- Developed *20+ Bill of Materials (BOM)* and *Standard Operating Procedures (SOP)* for new products.

EDUCATION

University of Louisiana at Lafayette, LA, USA Jan 2023-May 2025
Master of Science in Mechanical Engineering Lafayette, LA

Thesis Title: Digital Energy Assessment: A game-based learning approach

Committee: Peng Yin (Chair), Terrence Chambers, Jim Lee

Military Institute of Science & Technology, Dhaka, Bangladesh Jan 2015-Apr 2019
Bachelor of Science in Mechanical Engineering Dhaka, Bangladesh

Thesis Title: Construction and Performance Analysis of an Earth-Air-Pipe Cooling System

Committee Chair: Dipak Kanti Das

AWARDS & HONORS

- North American Board of Certified Energy Practitioners (NABCEP) Photovoltaic Associate May 2025
- National Science Foundation (NSF) Innovation-Corps Travel Grant November 2024
- Achievement Certificate from the U.S. Department of Energy's Industrial Training & Assessment Center May 2024
- Graduate Research Assistantship, University of Louisiana at Lafayette August 2023 - Present
- Graduate Teaching Assistantship, University of Louisiana at Lafayette January 2023 - August 2023

PROJECTS

Industrial Training and Assessment Center Program for U.S. Department of Energy Jan 2023-Present

Awarded certification of achievement for completing *13 energy assessments* (9 as student leader) with projected annual savings of over *a quarter of a million dollars*. Assessments include wastewater plant, lumber mill, food processing plant, etc.

Fresh-air Integration feature development in existing split type air-conditioners (AC) Nov 2022

Engineered and integrated *8 plastic and sheet metal* component assembly to improve indoor air quality and comfort.

Design and development of WSI-Inverna (Supersaver) split type ACs Jun 2021

Led the modification and design of plastic components for the indoor unit, achieving a cooling capacity of 12,000 Btu/hr and an Energy Efficiency Ratio (EER) of 3.95. This model became one of the *bestselling air conditioners in Bangladesh*.

CONFERENCE PAPER

Hoq, M., Alam, M. A., **Shafiq, T.**, Taimoor, I., Das, D. K. (ICMIME 2019). Construction and Performance Analysis of an Earth-Air Pipe Cooling System. DOI: [10.13140/RG.2.2.21558.61765](https://doi.org/10.13140/RG.2.2.21558.61765)

PROFESSIONAL DEVELOPMENT

Research Program	Oct 2024-Present
NSF I-Corps Program, Market Research Analyst, Team: <i>Thermofluid Tech</i>	
Guest Lectures	Fall 2023 – Fall 2024
Environmental Engineering (MCHE 466)	
Mechanical Engineering Department, University of Louisiana at Lafayette	
Teaching Assistance	Spring 2023
Heat Transfer (MCHE 469) and Environmental Engineering (MCHE 466)	
Mechanical Engineering Department, University of Louisiana at Lafayette	

SKILLS

Energy Simulation Software: EnergyPlus, OpenModelica, MEASUR, RESFEN, COMFEN, EES, PVlib, SAM
Programming Languages: Python, Modelica, C, C++
Hands-on Experience: Infrared Camera, Ultrasound Imaging Camera, Flue Gas Analyzer, and Vane Anemometer
Software: SolidWorks, Siemens' NX, Autodesk Inventor, Arena, JMP
Core Competencies: Lean Manufacturing, Lean Six Sigma, Energy Efficiency, Energy Simulation, 3D Modeling, Sustainable Design Intent, Structural Analysis, Leadership, Problem Solving, Organizational Skills, and Team Collaboration

CERTIFICATIONS

Certified SolidWorks Professional (CSWP)	
• Weldments (CSWP-WD)	September 2024
• Sheet Metal (CSWP-SM)	September 2022
• Surfacing (CSWP-S)	September 2022
• Drawing Tools (CSWP-DT)	September 2022
• Mechanical Design (CSWP-MD)	October 2021
Certified SolidWorks Associate (CSWA)	
• Simulation (CSWA-S)	September 2024
• Sustainable Design (CSDS)	September 2024
• Additive Manufacturing (CSWA-AM)	October 2021
• Mechanical Design (CSWA-MD)	August 2020

PROFESSIONAL AFFILIATIONS

- American Society of Mechanical Engineers (ASME)
- Louisiana Engineering Society (LES)

LEADERSHIP & SERVICE

• Vice President of Ragin Cajun Cricket Club	August 2024 - Present
• SolidWorks User Group Leader of South Louisiana SolidWorks User Group	January 2024 - Present
• SolidWorks Champion of SolidWorks Champions Program (worldwide 500 members)	May 2021 - Present
• Webmaster of IMechE Young Member Panel, Bangladesh	January 2019 - Present

ORGANIZATION & PROFESSIONAL ENGAGEMENT

South Louisiana SolidWorks User Group Meeting , University of Louisiana at Lafayette	April 2024
• Coordinated and managed all aspects of a hybrid SolidWorks User Group meeting (20+ attendees) at the University of Louisiana at Lafayette, including logistics for remote participants, and presented for SWUGN and SolidWorks tips & tricks.	
Speak Out For Engineering Bangladesh National Finals , Banani Club, Bangladesh	October 2019
• Oversaw the planning and execution of the national IMechE Speak Out For Engineering Finals presentation competition in Bangladesh, managing an in-person competition for 50+ guests and finalists and handling all event logistics.	

REFERENCE

Peng "Solomon" Yin

Associate Professor of Mechanical Engineering Department, University of Louisiana at Lafayette

Contact Information:

Email: peng_yin@louisiana.edu

Phone: (337) 482-5822

Terrence L. Chambers

Professor of Mechanical Engineering Department, University of Louisiana at Lafayette

Contact Information:

Email: tlchambers@louisiana.edu

Phone: 337-482-6731

Jim Lee

Professor of Mechanical Engineering Department, University of Louisiana at Lafayette

Contact Information:

Email: jlee@louisiana.edu

Phone: (337) 482-5354