# Asif Ali Zelab Gul

Chicago, Illinois, USA | +1-872-325-6546 | alikhaxxn@gmail.com | linkedin.com/in/asif-ali-rit/

## SUMMARY

Graduate student in Energy Systems with a strong foundation in Mechanical Engineering (BSc) and a focus on sustainable energy solutions. Skilled in CAD and SOLIDWORKS, with hands-on experience in renewable energy integration and system optimization. Proven ability to translate concepts into practical designs, including a solar-powered desalination system for water-scarce regions. Passionate about driving innovation in clean energy through technical expertise and collaborative problem-solving

## EDUCATION

**Illinois Institute of Technology, Chicago, IL, USA** **JAN 2025 - DEC 2026**
Master of Science in Energy Systems, Energy Generation and Sustainability

**Rochester Institute of Technology, Dubai, UAE** **JAN 2020 - MAY 2024**
Bachelor of Science in Mechanical Engineering

## WORK EXPERIENCE

**Kiran Ali Information Technology** *(Mechanical Engineer Intern)* **MAY 2022 – AUG 2022**
**Dubai, UAE**

- Utilized AutoCAD and other drafting software to develop detailed structural designs for various products, ensuring precision and adherence to project specifications
- Collaborated with the engineering team in designing custom automated equipment using SolidWorks, contributing innovative solutions and technical expertise.

**Fractal Systems** *( Technician Engineer)* **JAN 2023 – JULY 2023**
**Dubai, UAE**

- Engineered efficient and high-quality products, designs, and processes to meet client expectations.
- Specialized in integrating MADRIX control software with LED systems to create dynamic lighting displays.
- Assisted in designing, manufacturing, and programming an automated restroom prototype for DXB Airport with sensor-driven self-cleaning.
- Manufactured, programmed, and assembled a 3D miniature layout of The Line project for a Saudi exhibition.
- Designed and 3D-printed podiums and interactive lighting orbs for UAEU to guide guests and assign quests.
- Assembling projects were carried out for Mohammad bin Rashid Library, Abu Dhabi exhibition, Egypt Pavilion for exhibition, Fractal Studio, DNA display, Moving Wings LED display, LED roof

## PROJECT AND RESEARCH

**Beach Cleaning Robot** **JAN 2022 – AUG 2022**

- Developed an autonomous beach-cleaning robot using recycled materials to combat pollution, driven by my commitment to sustainability and making a global impact.
- Developed a path planning MATLAB code that avoids obstacles, and reaches the goal using a potential field method.

**Desalination By Thermosyphon** **JUL 2023 – MAY 2024**

- Designed and prototyped a standalone desalination unit powered by solar energy to address water scarcity in arid regions.
- Focused on thermodynamic efficiency, sustainable material selection, and low-cost implementation

**Binary Cycle Geothermal Plant Optimization**

- Simulated the performance of a binary geothermal system using EES, exploring working fluid options and multi-stage cycle designs.
- Analyzed how drilling depth, temperature, and pressure impact system efficiency.

**Electric Vehicle Battery Health Estimation**

- Developed a Python-based simulation to monitor and estimate EV battery degradation trends using drive cycle datasets.
- Applied basic machine learning models and state-of-health estimation techniques.

**Compression testing of 3D printed PLA pipe**

- Authored an unpublished journal paper with a team on compression testing of 3D printed PLA pipe (mini scale)

## SKILLS

**Designing Software :** Auto-cad | ANSYS | Solidworks | Auto-Desk Inventor | GT-SUITE
**Programming** : MATLAB | Basic C++ |Basic Python | Engineering Equation Solver (EES)
**Other** : MS Excel | Machinery | Manufacturing | Problem Solving | Project Management | Process Improvement | Multilingual