

# ALI NAZARI

GRADUATE APPLICANT

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## Pro file

Having obtained a master's degree in energy systems engineering, and possessing extensive research experience, I have cultivated the following attributes:

- Able to think analytically in order to create solutions.
- Have the ability to fully comprehend what the problem consists of and provide solutions from a well-informed standpoint.
- Able to fully understand the relevant requirements and efficiently apply resources to achieve the optimal outcome.
- Capable of succinctly and effectively translating technical jargon into layman's terms without patronizing others.
- Able to analyze an existing system to understand how the different pieces work individually and as a unit.

## Objective

- Throughout my academic career, I have devoted significant time and effort to conducting research and expanding my knowledge within the field of Mechanical Engineering. As a result of my passion and extensive research experience, I have identified a specialized area of interest in which I aim to excel. In order to further enhance my skill set, I am committed to pursuing a graduate degree in **Chemical Engineering, specifically focusing on e-fuel production**. My objective is to acquire the following qualities through this academic pursuit:
- Publish my work in academic journals, books, or other media.
- Conduct strong research in a way that other experts within my chosen area of academia will reference my work and my discoveries when teaching future students.
- I aim to acquire a comprehensive understanding of the sub-discipline, surpassing the knowledge level of both world experts and their advisors.

## Education

**Oct 2020 - Present**

Overall GPA: 17.91/20

**M.Sc. in Energy Systems Engineering**

Thesis: "The optimization of waste management in the city of Qom combined with optimization of water, and energy management."

**Khaje Nasir university of technology  
Tehran, Iran**

Description:

- I acquired knowledge regarding the fundamental technical concepts related to energy development and alternative energy systems. Additionally, I gained an understanding of their practical applications, particularly in relation to addressing the zero-carbon energy challenge, and I gained a deep understanding of the basic manufacturing process and application of different alternative energies.
- I learned how to methods to evaluate the dependability of systems (specifically, their ability to endure and withstand disasters) and implement strategies to mitigate risks. Furthermore, I gained expertise in constructing simulation models and devising algorithms for estimating the performance of energy systems and devices, particularly in chemical production units.

**Highlighted projects in the areas of:** 1- Technology of Pinch 2- Simulation and optimization of a wind farm and 3- Optimization of a power plant with a series of turbines.

**Sep 2015 - Feb 2020**

Overall GPA: 15.32/20

**B.Sc. in Mechanical Engineering,**

Thesis: "The technology of anaerobic digestion as well as geothermal energy which led to my first publication."

**Khaje Nasir university of technology  
Tehran, Iran**

Description:

- I gained knowledge in the areas of developing and implementing suitable experiments, analyzing and interpreting data, and utilizing engineering judgment to make informed conclusions.

**Highlighted projects in the areas of:** 1- HVAC designing, 2- Simulation and optimization of Rankine cycle 3- Energy modelling of Iran and 4- Designing of a refrigeration unit for fruits

# Publications

**December 2021**

**Science Direct, Renewable and sustainable energy reviews**

**Writers:** Ali Nazari, Majid Soltani, Morteza Hosseinpour, Walied Alharbi, Kaamran Raahemifar

Topic: "Integrated anaerobic co-digestion of municipal organic waste to biogas using geothermal and CHP plants: A comprehensive analysis"

Description: This paper introduces a feasible option for the heating system of digesters, which can improve the management of biogas.

Link: <https://doi.org/10.1016/j.rser.2021.111709>

**October 2022**

**Journal of Renewable Energy and Environment**

**Writers:** Morteza Hosseinpour, Ali Nazari, Mahdi Rezaei

Topic: "Techno-economic and environmental analysis of digestate treatment after anaerobic digestion process"

Description: This study examines the significance of utilizing digestate as a fertilizer in relation to the environmental impact of greenhouse gas emissions, specifically in comparison to a combined heat and power (CHP) unit operating with biogas.

Link: <https://doi.org/10.1016/j.rser.2021.111709>

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## Professional experience

**Jun 2021 – Jan 2023**

**Niroo Research Institute, Tehran, Iran**

**Co-partner  
(accompanied by Mr Morteza Hosseinpour)**

Description of the institute: Under the authority of the Ministry of Energy in Iran, this center is tasked with conducting research and making recommendations on energy policies in Iran.

Website: <https://www.nri.ac.ir/en>

Responsibilities:

- In my role, I was responsible for revising and reforming the policies of bioenergy and biomass in conjunction with proposed reforms for waste management in Iran.

**Jul 2019 – Dec 2019**

**Niroo Research Institute, Tehran, Iran**

**Intern**

Description of the institute: Under the authority of the Ministry of Energy in Iran, this center is tasked with conducting research and making recommendations on energy policies in Iran.

Website: <https://www.nri.ac.ir/en>

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## Language skills

• English:  
Understanding:  
Listening: C1  
Reading: C1  
Speaking:  
Spoken interaction: C1  
Writing: C1  
IELTS holder overall band  
score: 7.5

## Software skills

- ASPEN Plus
- LEAP
- Python
- Hap
- Matlab
- AutoCAD
- Java
- COMFAR
- Microsoft Office (Word, PowerPoint, Excel, Visio, etc.)
- Social media: Instagram, Linked In, etc.

## Personal skills

- Collaboration
- Adaptability
- Time-management
- Problem-solving
- Leadership
- Punctuality