

Amir Abbas Yahyaeian

Graduate Mechanical Engineering (MSME) student

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My research interests centered around Internal Combustion (IC) engines and Automobile Suspension during my undergrad at the IAU. My Bachelor's degree dissertation was titled: The effect of camshaft timing on the torque and horsepower of an IC engine.

I have been fascinated by AI and machine learning algorithms since attending UT in 2020. taking different courses, I gained intuition in this field and soon became a Teaching Assistant in AI Course at ME school. I have been doing self-study and research in Quantum Machine Learning as it would be the future of AI and the entire modern technologies.

I'm looking to become a professional mechanical engineer who can train deep learning models to solve classic problems in an intelligent, much faster, and more productive way. Also, I'm interested in teaching activities and want to get TA positions during my academic career.



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Experience



Graduate Research and Teaching Assistant

University of Tehran

Feb 2022 – June 2022 (5 months)

AI Course for ME Students

Under the supervision of affiliated research professor Mohammad Khoshnevisan, I -as the main TA- conducted lectures and tutorials twice a week on different topics, starting with the fundamentals of Python programming and AI concepts. We reached Quantum Computing and Quantum Machine Learning by the end of the semester.

It was an interesting experience and one of the unique courses at the University of Tehran, which was held in English and kept up with weekly hands-on sessions.

Education

IUPUI, IN, USA. Master of Science in Mechanical Engineering. 1 + 1.5 program.
Jul 2022-present.

University of Tehran, Tehran, Iran. Master of Science in Mechanical Engineering. 1 + 1.5 program.
Oct 2020-Jul 2022.

Islamic Azad University, South Tehran Branch, Tehran, Iran. Bachelor of Science in Mechanical Engineering.
Sep 2014 Sep 2020 .



Committee Member

Shemiranat Motorcycling & Car racing Association

Feb 2022 - June 2022 (5 months)

Education Committee

After getting the TA position in the AI course, I needed to concentrate more on teaching so I requested a role change and I became a committee member in the educational committee which is a part-time job.

I provided weekly lectures related to car maintenance, repariments, essential upgrades, off-road tours, etc.



Founder

Golden Eagle 4x4 Center

Mar 2016 - May 2022 (6 years 3 months)

I established Golden Eagle 4x4 Center to keep up with my projects and provide special public services: classic car restoration, including engine, power-train, suspension, and wiring repairment, and high-level modifications for 4x4 vehicles; engine swap, suspension upgrade, etc.

In May 2022, when I got my U.S. visa, I temporarily closed this center to continue my studies at IUPUI.

website: www.goldeneagle.ir

Research Interests:

- Quantum Machine Learning,
- Deep Learning,
- Machine Vision and Object Detection,
- Engine Control,
- Chassis and suspension systems of automobiles.



Graduate Teaching Assistant

University of Tehran

Nov 2021 - Feb 2022 (4 months)

Advanced Engineering Mathematics course

This course was held for the international graduate students in the joint Master's degree program at the University of Tehran. Under the supervision of Dr.Khoshnevisan, I conducted tutorials once a week on different materials and calculational apps related to Engineering and Mathematics; ODEs, PDEs, Maple, Python, etc.

Test Scores:

IELTES IDP

Score: 6.5 · Sep 2021

Duolingo

Score: 120/160 · Oct 2021

GRE

Score: V: 142, Q:155 · Oct 2021



Committee Secretary

Shemiranat Motorcycling & Car racing Association

May 2017 - Feb 2022 (4 years 10 months)

Off-road Committee

As a committee secretary, I was responsible for coordinating members with the officials, and also reviewing their proposals on different affairs. I contributed to hosting two national off-road challenges during these years.

Older Experiences

Technical Intern

Lico Molding

May 2018 – Jul 2019

CNC Machining

Apprentice

George Classic Workshop

Jun 2014 - Feb 2016 (1 year 9 months)

Classic Car Restoration



Laboratory Assistant

Islamic Azad University

2015 - 2015 (1 year)

Automotive Lab



Teaching Assistant

Islamic Azad University

Jan 2015 – Jun 2015

C# Programming Course



Intern

Irtoya: Iran Toyota Center

Aug 2011 - Aug 2011 (1 month)

Toyota Vehicles Wiring

Currently working on

1. Online Course

Machine Learning

Coursera – Stanford University

2. Self-Study

Quantum Machine Learning

Qiskit tutorials – IBM tutorials

Licenses & Certifications:

Iran Motor Sport Official Training

MAFIRI-FIA

Issued Feb 2022

MATLAB Onramp

MathWorks

Issued Jan 2022

AI Expert

Learners Point

Academy

Issued Dec 2021

Artificial Intelligence

KHDA Dubai

Issued Dec 2021

Baja Marshal

MAFIRI-FIA

Issued Oct 2019

Toyota Vehicle Electrical Technician

IRTOYA

Issued Aug 2019

Notable Projects

1. Engine Control Unit (ECU) Classification with a supervised machine learning algorithm, TensorFlow, Python (2022)
2. Medical Image Classification with a supervised machine learning algorithm, TensorFlow, Python (2021)
3. New arrangement for leaf spring suspensions with the combination of steel leaves and polyurethane dampers (2020)
4. Improving the quality of spark ignition in AMC 258 engine by using Chevrolet HEI distributor and coil (2019)
5. Increasing the caster angle by the use of my own designed caster plates for front leaf spring suspension (2019)
6. Blueprinting a GM 454 cu.in. engine and increasing the output power from 250 net HP to 350 net HP (2018)
7. Blueprinting an AMC 258 cu.in. engine and increasing the output power from 105 net HP to 150 net HP (2016)
8. Frame-off restoring a 1978 Golden Eagle Jeep (2015)
9. Frame-off restoring a 1977 Chevy Nova Concurs (2014)