

# Parimah Ghodrati

## Curriculum Vitae

☎ (+98) 9017031379  
✉ pmahgh@gmail.com

### Education

2018-2023 **B.Sc. in Mechanical Engineering**, Amirkabir University of Technology, Polytechnique of Tehran

GPA **14.72/20 (In-Progress)**

Thesis title Economic Feasibility Assessment of Solar Renewable Power Generation Systems

Supervisor Dr. Majid Saffar Aval

### Research Interests

- Product Design and Optimization
- IoT and Data-Driven Design
- Mechatronics and Robotics
- Thermal Systems and Energy Efficiency
- AI-driven generative design
- Renewable Energy Systems
- Computational Fluid Dynamics (CFD)
- Cost-Benefit Analysis

### Academic Projects

2023 **Numerical Solution of Incompressible Fluid Flow Problem in a Two-Dimensional Cavity**, *Computational Fluid Dynamics (CFD) course project*.

- Obtained the velocity and pressure contours resulting from the motion of one of the plates using the vorticity-stream function formulation and the finite difference discretization method.

2022 **Design and construction of a Cam & follower mechanism**, *Dynamics of Machinery course project*.

- Designed a cam profile, extracted velocity and acceleration curves using MATLAB, validated results with an ADAMS model, and fabricated the physical model with a 3D printer.

2021 **Design and construction of a bench vise**, *Machine shop course project*.

- Designed and built a precision bench vise using CATIA for CAD design and various machinery like drill press and milling machine for fabrication.

### Internships

2022 **Carbon footprint researcher**, *Noursun Energy*, Tehran, (3 months full-time)

2020 **Trainee for HVAC engineering**, *Arvand Consultant Engineers*, Tehran, (6 months part-time)

### Honours and Certificates

2018 Ranked 4014th among 642000 (top 1%) students in Mechanical Engineering National Universities Entrance Exam (Konkour) for Undergraduate Studies.

2021 **Python for DataScience**, Tehran University, (24 Hours)

2020 **MATLAB course**, Amirkabir University of Tehran, (28 Hours).

- 2020 **ANSYS Fluent course**, Amirkabir University of Tehran, (35 Hours).
- 2019 **CATIA course**, CATIA Iran Community , (40 Hours)
- 2019 **AutoCAD course**, Amirkabir University of Tehran, (32 Hours).
- 2022 **Organization committee member at KANS Scientific Competition**, Pardis Technology Park, Tehran
- 2019 **Organization committee member at Iran FIRA RoboWorld Cup**, Iran International Exhibition, Tehran
- 2019 **Organization committee member at Iran 7th Egg drop competition**, Amirkabir University of Technology, Tehran

## Technical Skills

- Languages English (**IELTS: To be taken soon**), Farsi (Native), German (B1 (Self-Assessed))
- Softwares AutoCAD (Advanced), CATIA (Advanced), ThermoFlow (Intermediate), ANSYS Fluent (Intermediate), Adams (Familiar), Microsoft Office (Advanced),  $\LaTeX$ (Advanced)
- Programming Languages MATLAB (Intermediate), Python (Intermediate), C++ (Familiar)
- Extracurricular activities Pianist (Intermediate), swimmer (Advanced), Volleyball player (Intermediate)

## Soft Skills

- Presentation
- Logical thinking
- Communication
- Discipline
- Teamwork
- Creative problem solving

## Relevant Academic Coursework

- Thermodynamics 2, (18/20)
- Engineering Economy, (16/20)
- Fluid Mechanics 2, (17.2/20)
- Foundry Workshop, (20/20)
- Engineering Drawing, (17/20)
- Welding Workshop, (19/20)
- Renewable Energies & Applications, (16/20)
- Automechanic Workshop, (18.5/20)

## Interests/Hobbies

- Playing piano
- Traveling
- Playing chess
- Swimming
- Watching movies
- Photography

## References

- Nader **Professor**, Department of Mechanical Engineering  
Montazerin Amirkabir University of Technology(Tehran Polytechnic), Tehran, Iran.  
Email: mntzrn@aut.ac.ir
- Majid **Professor**, Department of Mechanical Engineering  
Saffar-avval Amirkabir University of Technology(Tehran Polytechnic), Tehran, Iran.  
Email: mavval@aut.ac.ir