# Reza Yazdanfar

rezayazdanfar1111@gmail.com
linkedin.com/in/rezayazdanfar
rezayazdanfar.medium.com
github.com/yazdanfarreza

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|---|---|---|---|
| *Time Series Analysis* | *Computer Vision* | *Natural Language Processing (NLP)* | *Content Creation* |

## Education:

*B.Sc. in Petroleum Engineering* *Shiraz University, Shiraz, Iran* *September 2017- 2021*

## Experiences:

**Head** - Scientific Association of Petroleum Engineers Shiraz University *September 2020-2021*

**Member** - Iran Renewable Energy Association (IRREA) *September 2020-2021*

**Communication Coordinate** - World Petroleum Council Young Professionals *November 2020-2021*

**Junior Machine Learning Engineer** - Peykare Sazeh Kohan Company *March 2019 - August 2020*

**Machine Learning Engineer** - NOVUM-engineering GmbH *August 2022– Present*

## Professional Projects:

**"Applied Machine Learning to correlate Etched Fracture Width and Half-Length of Acid-Fractured Wells"** *2020*
Supervisor: Dr H. Mahdyiar Assistant Professor of Petroleum Engineering-Shiraz University
Proposed common ML models: Artificial Neural Network, Support Vector Machine, Radius Basis Function.

**"Forecasting Oil Production Rate of an oil and gas field by Advanced Algorithms for Univariate and Multi-variate with over 10 years data"** *2021*
Supervisor: Dr M. Escrochi EOR/IOR Research Institute Assistant Professor of Petroleum Engineering-Shiraz University
Proposed common DL models: AR, MA, AR(I)MA, AR-LSTM, SAR(I)MA

**"Predicting the Hydrate Free Zone of Reservoir Fluid by the use of Machine Learning"** *2021*
Supervisor: Professor B. Tohidi Professor of Petroleum Engineering-Herriot Watt University
Proposed common ML models: ANN, XGBoost, Random Forest, Decision Tree.

**Predicting the Fluid Property of CO2-mixture Transportation in Carbon Capture and Storage (CCS)** *2021*
Supervisor: Prof M. Riazi Professor of Petroleum Engineering-Shiraz University
Proposed common ML models: XGBoost, Random Forest, Decision Tree.

**Modelling of Lithium Ion Battery by using Radiation X-Ray Tomography (SRXTM) of Porous, Transition Metal Oxide Based Lithium Ion Battery Electrodes** *2021*

**Visualizing Geoscience data such as well log data, etc.** *2021*

## Publications:

**Forecasting and Optimizing the Performance of Polymer Electrolyte Membrane (PEM) Fuel Cell by Advanced Deep Learning Algorithms** *To be submitted*
Supervisor: Dr M. Pazhoohesh Senior Lecturer-De MontFort University
Proposed advanced DL models: Long-Short-Term-Memory (LSTM), Gated Recurrent Unit (GRU), TransformerEncoder (Self-Attention based)

## Technical Skills:

### Programming Languages

- Python
- MATLAB

### Deep Learning libraries

- TensorFlow
- PyTorch
- Keras

### Petroleum/Chemical Engineering

- PIPESIM
- HydraFLASH
- Aspen HYSIS

### Deep Learning Algorithms

- Self-Attention
- RNN(LSTM, GRU)
- AR-LSTM
- Transfomers
- CNN
- Informers

### Statistical Computing Software

- IBM SPSS Statistics
- MATLAB

## Volunteering Experiences:

**Organizing Courses** (Pipesime (2021), StimCADE (2021), Python in Data Science (2019), Aspen HYSIS (2020), etc.)

**Organizing Scientific Webinars in the field of Energy and Environment Industry** (Climate change: Challenges, Opportunities and Solutions (2021), Introduction to Material Science in Petroleum Engineering(2021), Women's Challenges in the Oil Industry (2021), Low salinity water flooding

## Languages:

Persian (Native)

English (Proficient)