Jovdat Rahimli

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Education

The University of Texas at Austin ***Austin, TX***

BSc in Petroleum Engineering Honors *Aug 2022 – May 2026*

- University GPA: 3.97/4.0 (Highest Honors); Cockrell School Engineering Honors Distinction; Full-Ride State Program Undergraduate Scholarship); Honors Thesis Title: AI-aided Geo Mapping of Undocumented Orphan Wells in Texas.
- Relevant Coursework: Calculus, Linear Algebra, Differential Equations, Numerical Methods and Programming; Geostatistics and Data Analysis, Subsurface Machine Learning, Drilling and Well Completions, Petrophysics, Reservoir Engineering 1: Primary Recovery, Reservoir Engineering 2: Secondary and Tertiary Recovery, Production Design, High Performance Computational Engineering (Graduate Course); Transport Phenomena
- Technical Skills: Python, scikit-learn, Machine Learning, Deep Learning, Google Colab, Time Series Analysis, Stochastic Modeling, Bayesian Networks, Optimization; Physics-Informed Machine Learning; Artificial Neural Networks, Large Language Models

Professional Experience

RAPID (RIG AUTOMATION AND PERFORMANCE IN DRILLING) ***Austin, TX***

Machine Learning Research Assistant *Sep 2023- Present*

- Working with world renowned Dr. Eric van Oort and his team solving some of the most advanced computational challenges in petroleum industry through advanced machine learning and optimization principles and methods.
- Completed confidential "Shell" reservoir project in Gulf of Mexico, improving OSV performance to ~91%, saving Shell around $600000 per each drilling operation.

UT Robotics (IEEE UT Austin) ***Austin, TX***

Software Team Member *Feb 2023 – Oct 2023*

- Working with a team of UT Austin engineering students to build a robot. The software team used computer vision and embedded systems to add specialties to the robots.

Undergraduate Research Assistant ***Austin, TX***

The University of Texas at Austin *Sep 2023 - Present*

- Conducting data science and machine learning research related to stochastic analysis, namely 3D modelling, visualization and printing of rock fractures and pores using Python, ImageJ, and other related software under the guidance of Prof. Dr. Masa Prodanovic.
- Advanced stochastic analysis, modeling with Fourier methods, to build predictive machine learning system for geophysical problems.
- Worked with Dr. Sergey Fomel on Machine Learning Applications in Geospatial Data Analytics, using the programming language Python and Julia.

HDR ***Austin, TX***

Engineering Extern *Jan 2023*

- Specially selected UT Austin Engineering students participated in HDR's externship event.
- Students became aware of the company's future goals and projects in the world.

Leadership and Activities

Azerbaijani American Youth Federation at The University of Texas at Austin ***Austin, TX***

President *Oct 2024 - Present*

- Founder and the President of the Azerbaijani Society at the University of Texas at Austin.

Director of STEM department ***New York, United States***

Azerbaijani- American Youth Federation *August 2023 – Present*

- Leading a team of 50+ Azerbaijani STEM students studying in the United States.
- Have participated in controlling and planning various projects in STEM fields, from its technical side to business.

Projects and Certifications

Energy Artificial Intelligence Hackathon *Jan 2024*

- With 3 undergraduate engineering students, we built a predictive machine learning model to solve a real-world energy problem, using a large dataset to build Random Forest Regressor ML model, sampling the data frame, training the model with these samples and bootstrapping using scikit-learn and other Python libraries.

- Completed the challenge with the best uncertainty model, ranking No.1 for MSE value of 88.779, and No.2 for overall code cleanliness.

bpX Machine Learning Challenge Hackathon *Mar 2024*

- With 3 UT Austin Petroleum Engineering Students, we built a machine learning model to predict maintenance of pump pressure difference for the next 30 days using given dataset of around 45-50 features.
- Completed challenge as one of the rising students, showing excellence at a young age and little experience compared to other competitors.

Microsoft

Data Science – Machine Learning Concentration *Jun 2023 - Present*

- Advanced Data Analytics, Supervised & Unsupervised Learning, Reinforcement Learning, Regression, Decision Trees, Uncertainty Models, Advanced Statistics

Honors and Papers

- Distinguished Petroleum Engineering Honors Award: For outstanding academic excellence, and allowance for taking graduate level courses.
- 5x President's University Honors List Inductance.
- State Program 2022-2026 Scholarship Winner: one of 5 students who received ~$300000 award to study at the US out of 700 applicants.
- 4IS Industrial Program Inductance
- Honorary Graduate Speaker: Dunya IB School
- Dunya IB School: Class of 2022 Valedictorian, highest IB score in school's exam route history.

Papers and Projects:

- Shell: Sparta Water-Based Mud Calculator and OSV (Offshore Supply Vessel) Logistics Optimization in Gulf of Mexico
- Machine Learning Prediction of Power Plant Generation and Maintenance of Solar Power Plants
- Applied Machine Learning to predict Average Pressure Difference on 15 wells: Energy AI Project
- Finite Difference Method in Steady-State Heat and Momentum Transport Problem in a Subsurface Fracture
- Artificial Intelligence Aided Geo Mapping of Undocumented Orphan Wells in Texas

Languages: English (Advanced); Turkish (Advanced); Azerbaijani (Advanced); Russian (Conversational); German (Conversational)

*References are available upon request.