Daniel Delgado-Uriarte

M.S. student in Petroleum Engineering, Texas A&M University

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Education

Texas A&M University, Harold Vance Department of Petroleum Engineering — Aug 2026 – expected Aug 2027
M.S. Petroleum Engineering (thesis) — *College Station, TX*

Universidad de Deusto — 2022 – 2026
B.S. Industrial Technology Engineering — *Bilbao, Spain*

- Bachelor's thesis: 10/10 with Matrícula de Honor (highest distinction)

University of the Basque Country (UPV/EHU), Bilbao School of Engineering — 2018 – 2022
B.S. Industrial Technology Engineering (transferred to Deusto) — *Bilbao, Spain*

Research

Drilling dynamics, with Dr. Roman Shor (Texas A&M University) — Sep 2026 – present

- Stick-slip detection from surface drilling data on public Volve and Utah FORGE wells, with downhole measurements as ground truth; abstract accepted at the 52nd Stanford Geothermal Workshop (Feb 2027)

Molecular simulation: H_2/CH_4 transport in polyethylene (bachelor's thesis) — 2025 – 2026

- Molecular dynamics of H_2/CH_4 diffusion in amorphous polyethylene; published in ACS Applied Polymer Materials (2026)

Data projects

Open Well Data (openwelldata.org) — 2026 – present

- Online catalogue of public subsurface data sources with a verification status per record, standardized well-data collections with DOIs on Zenodo; preprint on EarthArXiv

Open Well Records (openwellrecords.org) — 2026 – present

- Online at openwellrecords.org: public regulatory well records in common tables across jurisdictions (Zenodo, doi:10.5281/zenodo.24097206)

Publications

1. **Delgado-Uriarte, D.**, & López, A. (2026). Ensemble-dependent diffusivity selectivity in amorphous polyethylene: a statistically validated molecular dynamics study of H_2/CH_4 transport. *ACS Applied Polymer Materials*, 8(11), 8017–8031. doi:10.1021/acsapm.6c00287
2. **Delgado-Uriarte, D.** (2026). Open Well Data: a catalogue of public subsurface data sources with a verification status per record, standardized well-data collections and a channel dictionary. *EarthArXiv* (preprint). doi:10.31223/X5NJ8V
3. **Delgado-Uriarte, D.**, & Shor, R. J. (2027). Stick-slip and HFTO at Utah FORGE: what surface drilling data can and cannot detect. 52nd Stanford Geothermal Workshop, Stanford, CA, 8–10 February 2027 (accepted for presentation and proceedings)
4. **Delgado-Uriarte, D.** (2023). *Device for detection of hydrogen leaks in pipe systems and installations*. Spanish utility model ES U202330768, published 7 September 2023

Abstracts submitted

1. **Delgado-Uriarte, D.**, & Shor, R. J. Does machine learning beat decline curves out of time? A pre-registered benchmark on public Bakken well data. URTeC 2027
2. **Delgado-Uriarte, D.**, & Shor, R. J. Does a strength-scaled drilling-rate law transfer from North Sea sediments to Utah FORGE granite? ARMA 2027 Symposium

3. **Delgado-Uriarte, D.** How oil viscosity controls CO_2 partitioning and injectivity in depleted heavy-oil reservoirs. EAGE IOR+ 2027, Lyon
4. **Delgado-Uriarte, D.** Water-property models can swing simulated geothermal energy by a factor of two: correcting the physics before training machine-learning surrogates. Iceland Geothermal Conference 2027

Awards

- Finalist (top 50), MONDRAGON Sariak 2026 bachelor's and master's thesis awards, Fagor Taldea category
- Bachelor's thesis graded 10/10 with Matrícula de Honor (highest distinction), Universidad de Deusto, 2026

Presentations and public comment

- Public comment at the Railroad Commission of Texas hearing on the proposed amendments to 16 TAC §3.15 and §3.58 (SB 1150), Austin, 20 November 2026

Experience

Satlantis Jul – Aug 2025
Bid Manager Intern *Leioa, Spain*

- Supported bid preparation, documentation and client communications; built the bid team's documentation search tool (GitLab, Docker)

BHS 2022 – 2026
Hardware and firmware engineer (own project) *Bilbao, Spain*

- Wireless hydrogen leak detector for pipe systems: sensors, low-power firmware, RF, custom PCBs (Spanish utility model ES U202330768)

Certificates

Online courses: Reservoir Geomechanics (Stanford); Oil & Gas Industry Operations and Markets (Duke); Carbon Capture and Storage (Edinburgh); Corrosion Science and Engineering (Manchester); Natural Attenuation of Groundwater Contaminants (Rice); Politics and Economics of International Energy (Sciences Po); Macroeconomic Management in Resource-Rich Countries (IMF); Negotiating Extractive Industry Contracts (SDG Academy). FEMA Emergency Management Institute: IS-100.c, Introduction to the Incident Command System (13 Nov 2026; 0.20 IACET CEU).

Languages

Spanish (native); English (Cambridge C1 Advanced; TOEFL iBT); French (DALF C1)

Skills

Drilling and production: drillstring dynamics, torque and drag, hydraulics, ROP and specific energy; nodal analysis, decline curves, PVT; WITSML and MWD data

Simulation: ECLIPSE 300 THERMAL, open-DARTS, OPM Flow; LAMMPS, ReaxFF

Software and hardware: Python (pandas, scikit-learn, PyTorch, JAX), Rust, MATLAB, SQL, Git, Linux/HPC; embedded C, PCB design, sensors