

BARUN DAS

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14529 Ballyclarc Drive | Austin, TX 78729

EDUCATION

Doctor of Philosophy, Petroleum Engineering	The University of Texas at Austin
Masters of Science, Statistics	The University of Texas at Austin
Masters of Science, Petroleum Engineering	The University of Texas at Austin
Bachelor of Science, Petroleum Engineering	The University of Texas at Austin

Computer Skills:

Programming Languages: Python, Go, Scala, C++, Julia

Data Engineering: SQL, NoSQL, Snowflake, AWS Lake Formation, Kubernetes

Machine Learning & Data Science: TensorFlow, Pandas, Flux, Numpy

High-Performance Computing: CUDA, Parallel Computing

Eligible to work in the USA

EXPERIENCE

Software Engineer / Data Scientist– Resermine Inc.

2020- Present

- Developed a workflow that utilized **Neural Networks** and optimization algorithms to add value to the oil and gas field analysis workflow.
- Sped up a hybrid reduced-order model by 5x by converting the source code to Julia and changing the optimization scheme from sequential quadratic programming to a quasi-newton method.
- Sped up a hybrid-reduced order model by 10x by incorporating **CUDA GPU programming**.
- Integrated variations of hybrid modeling code into the backend using PyCharm in 50% of allotted time.
- Developed five different Decline Curve Analysis workflows for a European oil company with two other colleagues: Standard, **Machine Learning (LSTM)**, Probabilistic Forecast, Autofit, and Multisegment.

Graduate Research Assistant, Petroleum Engineering, Dr. John Foster – UT Austin

2019 – Present

- Developed HPC-based algorithms to solve computational fracture mechanics problems.
- Participated in the 4th Sandia Fracture Challenge.
- Coupled the M7-Microplane model with the Bond-Based Peridynamics equation to simulate wellbore stability problems.

Teaching Assistant, Drilling Engineering & Physics UT – Austin

2021-Present

- Held 50% more office hours than expected for both courses.
- Graded all assignments for both courses within 24 hours of submission.
- Taught 70 students (Drilling) and 40 students (Physics) on a weekly basis the fundamentals of drilling engineering and physics.

LEADERSHIP EXPERIENCE AND ACTIVITIES

2nd PGE Data Science Hackathon – Team Lead

Spring 2022

- Led a team of petroleum engineers and computer scientists to forecast the 2-Year Cumulative Oil Production and well placement of 3 wells using a mostly physics-based approach coupled with geostatistics over a 48 hour period.
- Placed 12th overall and 3rd on code out of 30 teams.

Front Rower – University of Texas Men's Rugby Club

2021- 2025

- Attended practice twice a week and played some 7s/ 15s games.
- Encouraged fellow teammates to develop a weightlifting regimen and nutrition plan.