**BARUN DAS**
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14529 Ballyclarc Drive | Austin, TX 78729

## EDUCATION

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|---|---|
| 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.** 2022- 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.