Jiaqi Du

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EDUCATION

MS in Petroleum Engineering. *The University of Texas at Austin* Expected Aug 2025

- **GPA: 4.0/4.0**
- Research Area: Reservoir Simulation

BA in Petroleum Engineering. *China University of Petroleum, Beijing* May 2021

- **GPA: 4.0/4.0**

PROJECT EXPERIENCE

Solo Projects, Cockrell School of Engineering, The University of Texas at Austin

Topic: Comparison three Decision Tree Models for History Matching using Python Sep-Nov 2023

- Developed three regressors, Decision Tree, Bagging Forest and Random Forest using different model complexity for history matching and production procasting
- Demonstrated the best regressor among three tree-based regressors by analyzing the error components
- Evaluated two different forest, Bagging and Gradient Boosting, with different learning rates by calculating the expected loss, bias and variance across different tree depths
- Preprocessed data, visualized results and summarized conclusion for potential publication or future utilization

Topic: 3D Numerical Solutions of PDE system using Python Jan-Apr 2024

- Developed a fully implicit and a Crank-Nicolson method-based solution for a 1D two-phase flow convection problem, ensuring reliable simulation results
- Solved a 2D single-phase flow problem with high accuracy, matching the analytical solution
- Designed a coupling solution and a simultaneous solution with Jacobian matrix to tackle a 1D non-linear PDE system, achieving robust results
- Resolved momentum, energy, and continuity equations to model 2D temperature and velocity Fields, obtaining steady-state solution
- Implemented a fully implicit method to solve a 3D Velocity Field, with results verified against analytical solutions

WORK EXPERIENCE

Teaching Experience, Cockrell School of Engineering, The University of Texas at Austin

- **Teaching Assistant,** Engineering Analysis May-Jul 2024
  Helped students solving math questions, teaching math conceptions, proving strong communication skills
- **Teaching Assistant,** Engineering Analysis Aug-Dec 2024
  Grade 30 students over 8 assignments, proving good time management

SKILLS

- SOFTWARE: Proficient in CMG (STARS, Builder), t-navigator
- PROGRAMMING LANGUAGE: Proficient in Python, C++, Matlab

HONORS

- Society of Petroleum Engineers(SPE) Scholarship (Rank 1st out of 118 recipients) Nov 2019
- China National Scholarship (Rank 1st out of 124 recipients) Nov 2018