ABHISHEK D. BIHANI

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Ph.D. Candidate in Petroleum Engineering with experience in Data Modeling, Computer Vision, and Analytics

EDUCATION

The University of Texas at Austin, USA

Doctor of Philosophy in Petroleum Engineering | GPA: 3.70/4.00 — June 2016 - December 2019 (Expected)

Master of Science in Petroleum Engineering | GPA: 3.81/4.00 — August 2014 - May 2016

Relevant Courses: Subsurface Machine Learning, Digital Rock Petrophysics, Engineering Analysis, Analytical Methods

Maharashtra Institute of Technology, University of Pune, India

Bachelor of Engineering, Petroleum Engineering | Grade: 73.98/100 (First Class with Distinction) — August 2007 - May 2011

Honors: Silver Medalist, Ranked 2nd in Bachelor of Engineering

GRE: 327/340 (scaled), TOEFL: 114/120, IELTS: 9.0/9.0

SKILLS

- Programming: MATLAB, Python, C++
- Libraries: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, TensorFlow, Keras, Palabos
- Analytics: Spotfire, Tableau, PHDWin, SPSS
- Technical Knowledge: Digital Rock Petrophysics, Computer Vision, Neural Networks, High-Performance Computing, Git, Bash

PROFESSIONAL EXPERIENCE

Graduate Research Assistant – The University of Texas at Austin – TX, USA — **August 2014 – Present**

- Applied Digital Rock Physics and Deep Learning (Deeplab-v3+ using Tensorflow) based image segmentation workflows to identify features such as pores, silt grains, and clay from scanning electron microscope (SEM) images with 89% pixel-accuracy
- Reconstructed 3D pore-space from SEM images using statistical analysis and applied lattice Boltzmann method in parallel using high-performance computing resources to show that correlated heterogeneity enhances flow of CO_2/hydrocarbon and published papers in top peer-reviewed journals
- Constructed synthetic well logs, and pore size distributions using principal-component regression on logging data from multiple neighboring wells and validated with experimental petrophysical data

Reservoir Engineer – Oil India Limited - Duliajan, India — **October 2011 – July 2014**

- Conducted reservoir and well-level analysis for 500+ wells using analytics and modeling to make recommendations of infill wells/workover interventions leading to 3000+ barrel/day rise in oil production
- Built a non-linear multivariate regression model for prediction of crude oil viscosity behavior from database of experimental data

Undergraduate Intern – Oil and Natural Gas Corporation of India - Mumbai, India — **January 2011 – June 2011**

- Worked in team to optimize the gas injected in a gas-lift well at Mumbai High Field through nodal analysis of production data and improved the oil recovery by 90 barrel/day

Summer Intern – Essar Oil Limited – Mumbai, India — **June 2010 – July 2010**

- Conducted history matching, production forecasting and sensitivity analysis using Monte Carlo method on 10 coal-bed methane wells at Raniganj (E) Block to reduce uncertainty in input data

RELEVANT PAPERS:

- **A. Bihani,** H. Daigle (2019). On the Role of Spatially Correlated Heterogeneity in Determining Mudrock Sealing Capacity for CO_2 Sequestration. Marine and Petroleum Geology, 106(106), 116–127.
- D. Jain, **A. Bihani** (2014). PETROTECH A-2238: Crude oil viscosity correlations: A Novel approach for Upper Assam Basin. Petrotech Conference, New Delhi, India.

AWARDS AND LEADERSHIP

- Department of Petroleum and Geosystems Engineering Research Award at GAIN 2019, Austin.
- Statoil/Equinor Fellowship, UT Austin, 2016-2019
- Advanced Communicator Bronze/Competent Communicator/Competent Leader – Toastmasters International, September 2011
- Graduate Faculty Selection Committee, UT Austin, 2017-2019
- Presiding Officer – Indian Parliamentary Election, Dibrugarh Constituency, May 2014
- Vice President, Public Relations – Toastmasters Club of Pune-West, August 2010 – June 2011
- President – MIT-SPE Student Chapter, July 2010 – June 2011