

**OBJECTIVE**

Seeking for internship position in petroleum engineering

**QUALIFICATIONS**

- Specialized in streamline-based history matching and optimization
- Industry and research experience in geo-modeling, reservoir simulation and history matching
- Proficient in object oriented programming (C++)

**SKILLS**

Commercial software: Petrel, Eclipse, Intersect, RMS  
 Programing languages: C++, Matlab, VBA, FORTRAN

**EDUCATION**

PhD	Petroleum Engineering, Aug.2013—May.2017 Texas A&M University, College Station	Academic advisor: <b>Akhil Datta-Gupta</b> <b>GPA: 4.0/4.0</b>
M.S.	Petroleum Engineering, Sep.2010—Jun.2013 China University of Petroleum (Beijing)	<b>GPA: 4.0/5.0 (3.6/4.0)</b>
B.S.	Petroleum Engineering, Sep.2006—Jun.2010 China University of Petroleum (Beijing)	<b>GPA: 4.0/5.0 (3.6/4.0)</b>

**GRANTED WORK**

**Streamline-based software development (C++)** **Jan.2014—Present**  
 MCERI, Texas A&M University, College Station, Texas

**Objective:** this software is designed for fast calibration of high resolution geologic models to dynamic data. It also allows for flow visualization, identification of well drainage and swept volumes and selection of optimal well locations for infill drilling.

**Content:**

- Design efficient data structure & flexible hierarchy, design algorithms for generating streamlines, develop software interface and integrate workflow between Eclipse, Petrel and streamline-based software.
- Utilize the software to do history matching and optimization for field cases (Gold Smith, Bijupira, Brugge, Husky).

**INTERNSHIP**

**Reservoir Engineer Internship** **May.2015— Aug.2015**  
 Research and Production Engineering Department, **Chevron ETC**, Houston, USA

**Objective:** implement data mining techniques to deal with data noise and outliers, thus improving predictions and uncertainty analysis of reserves and peak rate.

**Content:**

- Research machine learning techniques (Random Forest, Gradient Boosting Method, and Support Vector Regression) and implement them inside chevron's reservoir software (C++), including software interface design.
- Test techniques with field cases and make strategy for technique choosing and hyper parameters tuning. RF and GBM are favorable for large sample pool and are good at dealing with data noise, SVR is preferred for smaller sample pool and can generate continuous data-exact regression model.
- Integrate Random Forest and Splines to generate hybrid method, which yields better performance and efficiency than others.

**Reservoir Engineer Internship** **May.2012— Aug.2012**  
 Research and Development Department, **CNPC Changqing Branch**, Shanxi, China

**Objective:** identify remaining oil in nine spot pattern and design recovery scheme for remaining oil.

**Content:**

- Estimate heterogeneity strength by statistic of wells performances of different field sections (Majiashan, Bai209, Panguliang, Wangyao).

- Build geo-models for the field sections with Petrel.
- Run simulation for the blocks with Eclipse E100 & FrontSim, and do history matching.
- Optimize recovery scheme for field sections, including design of multi-stage fractured horizontal wells.

## RESEARCH EXPERIENCE

### **History matching of WCT, BHP and GOR by streamline method** **Jan.2014— present**

Research Assistant      Texas A&M University, College Station, Texas

- Design tracing algorithms in corner point grid and in none-neighbor connections (faults and pinch out).
- Develop streamline based data integration algorithm to calibrate geology models with water cut, bottom hole pressure and gas oil ratio data.

### **Model calibration with natural fractures predicted by layer curvature method** **Jan.2013— Jun.2013**

Research Assistant      China University of Petroleum, Beijing, China

- Derive 3D surface curvature computation formula and develop Matlab codes to generate the curvature map, and natural fracture index field.
- Calibrate reservoir model permeability by natural fracture index.
- Apply calibrated permeability to improve history matching results.

### **Model calibration for anisotropic and heterogeneous field** **Jul.2012— Dec.2012**

Research Assistant      China University of Petroleum, Beijing, China

- Convert water cut and bottom-hole pressure to anisotropy and heterogeneity indexes for the well cells.
- Generate continuous anisotropy field and heterogeneity field with Kriging method, and calibrate the permeability fields.
- Apply calibrated permeability to improve history matching results.

## HONORS & AWARDS

### **Petroleum Engineering-Student Paper Contest, Doctoral-Section 3, 1<sup>st</sup> Place Winner** **2015**

Texas A&M University, College Station, Texas

*Water Cut History Matching by Streamline Method*

### **Mathematical Modeling Contest, First Prize** **2008**

China University of Petroleum, Beijing, China

### **Outstanding Bachelor Thesis** **2010**

China University of Petroleum, Beijing, China

*Application of Advanced Water Injection in Low Permeability Reservoir*

### **First-Class Scholarship** **2007-2012**

China University of Petroleum, Beijing, China

## VOLUNTEER ACTIVITY

### **The Big Event, College Station/Bryan** **Mar.2015**

- Clean gutters, windows and floors for old couple.

### **National Science Bowl, Texas A&M University** **Mar.2015**

- Score keeper for middle team contest

### **International Hiking Activity, Beijing, China** **2006-2007**

- Serve water, food and first aids to participants

## INTEREST

Painting, fitness, golf, climbing, basketball, tennis, swimming, kendo, judo