

# YUCHEN ZHANG

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## EXECUTIVE SUMMARY

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- Experience in data visualization with Python, JavaScript and Tableau (A BI tool similar to Spotfire).
- Good understanding of commonly used machine learning algorithms: their hypothesis functions, objective functions, training (optimization) and regularization (overcome overfitting).
- Extensive experience with SQL and Relational Database.
- Familiar with petroleum production optimization algorithms and able to build optimization routine upon commercial or self-built simulator.
- Fast learner and passionate to learn new skills and knowledge.

## WORK EXPERIENCE

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*Research Associate, The University of Tulsa, Tulsa* Oct. 2017 – Present

- Debugged and optimized the research team's proxy simulator (C++).
- Promoted the implementation of version control (git/bitbucket) and software development working flow to the research team.

*Full Stack Software Engineer, Spherexx, Tulsa* Sep. 2016 – Oct. 2017

- Built Microsoft Azure based web applications. Developed database, server-side and client-side code for a web-based revenue management application and an inventory management system.
- Worked on the design of **relational database** and the optimization of **SQL** based on business requirements.
- Built responsive web-based user interfaces for a sales monitoring dashboard application.
- Shorten SEO team's working time from 2 day to 1 hr by automating a SEO reporting process for over 500 clients.

*Research Assistant, The University of Tulsa, Tulsa* Aug. 2014 – Jul. 2016

- Coded reservoir simulators with C++/Matlab for researching on the performance of various non-linear solvers.
- Derived and formulated a data-driven algorithm to optimize well BHP control strategies. Improved expected Net Present Value (NPV) by up to 20%. Realized the algorithm with C++.

## EDUCATION

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| • <b>The University of Tulsa</b>                                       | <b>Tulsa, USA</b>     |
| • <i>Master of Science in Petroleum Engineering (GPA: 3.9 / 4.0)</i>   | Jul. 2016             |
| • <b>China University of Petroleum, Beijing (CUPB)</b>                 | <b>Beijing, China</b> |
| • <i>Bachelor of Science in Petroleum Engineering (GPA: 3.7 / 4.0)</i> | Jun. 2014             |

## SKILLS

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- Hands-on experience on **Text Mining** and **Machine Learning**. Familiar with the data science pipeline: data cleaning and preprocessing, feature extraction, feature selection, dimensionality reduction, training, cross validation and hyper parameter optimization.
- Familiar with the tools used for data analysis: Jupiter Notebook, python's Pandas, Numpy, Scipy, Matplotlib, Scikit-Learn, NLTK etc.
- Top 12% on Kaggle Competition: "[Home Depot Product Search Relevance](#)".
- Excellent understanding of **Object-Oriented, Procedural and Functional programming** paradigms. Working experience with **C++**(5 yrs), **Python**(2.5 yrs), **JavaScript/Node.js**(1.5 yrs), **C#**(1.5 yrs), **ShellScript**(1.5yrs), **VB**(1.5 yrs), **Matlab**(5 yrs).
- Comfortable with cross-OS working environment: **Linux**, **OS X** and **Windows**.