

# YULIN. MA

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## OBJECTIVE

To obtain a Field Engineer position in Baker Hughes

## EDUCATION

M.E., Safety Engineering, China University of Petroleum, Beijing	Sep. 2017 – Jun. 2020
Cumulative GPA: 3.72 / 4.0	Beijing, China
B.S., Safety Engineering, Qingdao University of Science and Technology	Sep. 2013 – Jun. 2017
Cumulative GPA: 3.84 / 4.0	Qingdao, China

## PROFESSIONAL EXPERIENCE

Research on Intelligent Diagnosis Mechanism and Pre-warning Method of Petrochemical Equipment based on Digital Twin	Oct. 2018 – Jun. 2020
<ul style="list-style-type: none"><li>■ Researched multi-source signal fusion methodologies</li><li>■ Analyzed signals based on wavelet transformation and reconstructed phase space</li><li>■ Investigated physics informed machine learning and deep learning methodologies for machinery fault diagnosis</li><li>■ Researched deep transfer learning-based methodologies for machinery fault diagnosis under varying operating conditions</li><li>■ Conducted model sensitivity analysis and fault feature visualization</li></ul>	
Design and Develop Condition Monitoring Client Software for Oil Pump Units	Jul. 2017 – Jun. 2020
<ul style="list-style-type: none"><li>■ Developed safety evaluation and equipment management module</li><li>■ Developed vibration signal processing and fault diagnosis module</li><li>■ Managed Mysql database and conducted database synchronization</li></ul>	
Research on Fault Diagnosis systems for Natural Gas Compressors	Mar. 2019 – Jun. 2020
<ul style="list-style-type: none"><li>■ Surveyed 7 key compressor stations of Sichuan-East natural gas pipeline</li><li>■ Built signal acquisition systems based on Beckoff to collect vibration signals</li><li>■ Conducted database analysis of Bently 3500 condition monitoring system</li></ul>	
Safety, Risk Analysis and Integrity Management for Hutubi Natural Gas Station	Nov. 2018 – Jun. 2020
<ul style="list-style-type: none"><li>■ Collected station data and organized team-work schedule</li><li>■ Evaluated safety and risk for critical working equipment and control instruments</li><li>■ Written final technical report based on research results</li></ul>	
Combustion Analysis of Flame Retardant Carbon Fabric based on Layer-by-layer Assembly Technology	Oct. 2016 – Jun. 2017
<ul style="list-style-type: none"><li>■ Researched flame retardant carbon fabric using layer-by-layer self-assembly technology</li><li>■ Conducted experimental study on combustion properties</li></ul>	

## AWARDS & HONORS

■ National Graduate Scholarship	Sept. 2019
■ Excellent Graduate Student of China University of Petroleum, Beijing	Sept. 2018 and 2019
■ Third Prize of National Graduate Student Mathematical Contest in Modeling	Dec. 2017 and 2018
■ Honorable Mention in Interdisciplinary Contest in Modeling (USA)	Jan. 2016
■ First Prize of Shandong Division in National Undergraduate Student Mathematical Contest in Modeling	Nov. 2015

## LEADERSHIP ACTIVITIES

- Group Leader of National Mathematical Competition in Modeling Sep. 2017 and 2018
- Research Assistant of Sense to Safety Lab Sep. 2017– Jun. 2019
- Group Leader of Undergraduate Innovation Experimental Program Sep. 2016 – Jun. 2017
- Department Vice-President of Undergraduate Student Union Jun. 2014 – Sep. 2016

## PROFESSIONAL SKILLS

- Competent user of deep learning frameworks such as Keras, TensorFlow and Pytorch
- Familiar with methodologies of industrial safety and risk analysis
- Experienced in Python, MATLAB, C#, Java, SQL, C

## PUBLICATIONS

- Jinjiang Wang, **Yulin Ma**, Laibin Zhang, Dazhong Wu, R.X. Gao, Deep Learning for Smart Manufacturing: Methods and Applications. *Journal of Manufacturing Systems*, 2018, 48: 144-156.
- Jinjiang Wang, **Yulin Ma**, Zuguang Huang, Ruijuan Xue, Rui Zhao, Performance Analysis and Enhancement of Deep Convolutional Neural Network: Application to Gearbox Condition Monitoring. *Business & Information System Engineering*, 2019, 61(3): 311-326.
- **Yulin Ma**, Jinjiang Wang, Fei Tao, R.X. Gao, Transfer Learning for Intelligent Fault Diagnosis in Smart Manufacturing. Submitted to *Journal of Computing and Information Science in Engineering*.