

# Pengmiao Zhang

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## EDUCATION

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<b>University of Southern California (USC)</b>	Los Angeles, USA
PhD in Computer Engineering	September 2019 - present
<b>Harbin Institute of Technology (HIT)</b>	Harbin, China
Master of Engineering in Electrical Engineering	September 2013 - July 2015
<b>Northeastern University (NEU)</b>	Shenyang, China
Bachelor of Science in Electrical Engineering and Automation	August 2009 - June 2013

## PUBLICATIONS

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- **Zhang, P.**, Gao, Q., Cheng, L., & Xu, D. (2014). Research on Downhole Multi-Parameter Comprehensive Measurement of ESP. *Fourth International Conference on Instrumentation and Measurement, Computer, Communication and Control* (pp.346-350). IEEE.
  - Jin, M., **Zhang, P.**, Li, G., Gao, Q., Li, X., & Xu, D. (2015). A Downhole Multi-Parameter Monitoring System for Electrical Submersible Pump. *International Conference on Power Electronics and Ecce Asia* (pp.1660-1663). IEEE.

## WORK EXPERIENCE

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<b>Neusoft Corporation</b>	Shenyang, China
Big Data Researcher	September 2018 - Present
<b>Shenyang Engine Design Institute (SEDI)</b>	Shenyang, China
Electrical, Measurement & Control Engineer	August 2015 - March 2018

## RESEARCH & PROJECTS

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<b>Meta-LSTM Models for Memory Access Prediction</b>	USC	September 2019 - Present
• Research on compact LSTM models that can predict the next memory access with high accuracy		
• Use meta-learning models to predict for a class of applications at the cost of few retraining steps at runtime		
<b>Data Driven Estimation of Battery State of Health for Electric Vehicles</b>	Neusoft	September 2018 - July 2019
• Research on the algorithm of estimating SOH (State of Health) based on the historical distribution of EV fleet data		
• Design a deep learning regression model by combining Recursive Least Squares algorithm and LSTM network		
<b>Neural Network Modeling for Engine Working Condition</b>	SEDI	June 2016 - December 2017
• Established and trained a Back Propagation neural network in MATLAB for operating engines according to test data		
• Forecasted engine parameters including combustion efficiency and air mass flow at various combustion states		
<b>Multi-Sensor Data Fusion for Engine Test</b>	SEDI	November 2015 - May 2016
• Studied and implemented a data processing method based on Grubbs' test to eliminate outliers in measured data		
• Applied an adaptive weighted fusion estimated algorithm to fuse effective data from an array of sensors in engine tests		
<b>Data Collecting &amp; Processing Software for Engine Test</b>	SEDI	August 2015 - March 2018
• Designed the framework for formula management feature using Visual Basic, VC++ DLL, and MS Access database		
• Devised and developed user-defined expression features using an algorithm based on Stack and Reverse Polish notation		
<b>Multi-Parameter Monitoring Technology for ESP Wells</b>	HIT	September 2013 - June 2015
• Researched a long-distance 7-parameter signal transmission mechanism based on current loop and PWM filtering		
• Coded a data collection, timing, digital filtering and display program based on ARM7 with Keil		
<b>Bidirectional Power Converter for Microgrid Systems</b>	NEU	March 2013 - June 2013
• Analyzed mathematical models, and studied the control method based on dual-loop vector control and current feedback		
• Simulated each mode of the converter based on MATLAB/Simulink, and analyzed the output harmonic with FFT		

## HONORS & AWARDS

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• Delta Scholarship for Outstanding Students	2015
• First Prize Scholarship of Excellent Achievements in Harbin Institute of Technology	2014
• Excellent Student Cadre in Northeastern University	2010

## SKILLS

### Programming Languages

- Python, C, C++, MATLAB, Visual Basic, Scala, SQL

### Software

- Visual Studio, Anaconda, IntelliJ IDEA, MATLAB /Simulink, MS Access, Multisim, Altium Designer, Keil