

# Zhenqing (ZQ) Li

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## — Experiences —

08/2018 - Present    **Manager, Data Science**, Capital One, McLean, VA

- Challenge model built for Card Transaction Fraud leading to a \$4M increase in fraud prevention.
- Lead validation of Capital One's main street risk model, one of the highest level model used in US Card business
- Extensively using AWS cloud based computing for modeling and building data engineering pipeline

09/2016 - 08/2018    **Principal Data Scientist**, Capital One, McLean, VA

- Validating behavior, fraud and recommendation models in card customer acquisition and management at model risk office
- Extensively using AWS cloud based computing for modeling and building data engineering pipeline
- Investigating new tools to provide opinions to 1st line card data scientist team
- Maintained/modernized three legacy SAS based model-monitoring tools
- Contributing to various internal open source projects

06/2012 - 09/2016    **Research Chemist**, Lubrizol, Wickliffe, OH

- Developed a statistical model to predict chemical toxicity, saving registration cost (\$1M)
- Wrote an image processing software to assess hair straightening after shampoo treatment
- Applying Design of Experiment concepts consistently in new product development
- Developing rheology modifier for lubrication and supporting pilot scale-up/manufacturing
- Supervise technicians

## — Work Authorization —

Permanent Resident

## — Skills —

Core Skills	Python (numpy, scipy, matplotlib, pandas), R(data.table, ggplot2), H2O (www.h2o.ai), Spark, SQL, AWS, EMR, Ansible, Terraform
Unix/Linux Experiences	Extensively use Linux/Unix system for 10 years
Statistics	Statistical data analysis, Design of Experiment (DoE), Six Sigma Green Belt
Language	Chinese Mandarin (native), English (fluent)

## — Open Source Projects —

Smart Underwriter	<a href="https://smartunderwriter.herokuapp.com">https://smartunderwriter.herokuapp.com</a> I made a stochastic gradient descent trained SVM model, using Fannie Mae's single family housing data from 2000 to 2015. My project models the automated underwriting system (AUS) credit decision. For detail on data acquisition, processing and machine learning, please check the <a href="#">data acquisition</a> or <a href="#">training models</a> . You can also checkout the <a href="#">GitHub repo</a> .
NYC Bus Track	<a href="https://nyc-bus.herokuapp.com">https://nyc-bus.herokuapp.com</a> . Analyze NYC's bus status using both historical and real time data. Source: <a href="#">Github</a>
Trulia Scrapping	Study of Trulia Traffic Using Python to scrape Trulia housing data in different US states via its API. Analyze and plot those housing data by using R with ggplot2 and ggmaps. Source: <a href="#">Github</a>

## — Education —

03/2016 - 05/2016	<b>Fellow at The DataIncubator Inc.</b>
2016 - Present	<b>Machine Learning Track</b> <a href="#">Neuron Networks and Deep Learning</a> ; <a href="#">Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization</a>
2016 - Present	<b>Functional Programming Track</b> <a href="#">Functional Programming Principles in Scala</a>
2015 - Present	<b>Data Science Track</b> by John Hopkins University (Coursera) <a href="#">The Data Science's Toolbox</a> ; <a href="#">R Programming</a> ; <a href="#">Getting and Cleaning Data</a> ; <a href="#">Exploratory Data Analysis</a>
2015 - Present	<b>Fundamentals of Computing</b> by Rice University (Coursera) <a href="#">An introduction to interactive programming in Python: Part I</a> ; <a href="#">An introduction to interactive programming in Python: Part II</a>
05/2008 - 06/2012	PhD, Materials Science & Engineering <b>The Ohio State University</b> , Columbus, OH
08/2006 - 05/2008	MS, Materials Science & Engineering <b>Clemson University</b> , Clemson, SC
09/2002 - 07/2006	BS, Macromolecular Science & Engineering <b>Fudan University</b> , Shanghai, China

## — Publications —

Full publication list is at [Google Scholar](#)