

Zhenzhuo Lan

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EDUCATION

UNIVERSITY OF SOUTHERN CALIFORNIA (USC)

MS IN COMPUTER SCIENCE

PHD IN CHEMICAL ENGINEERING

GPA: 3.62 / 4.0

2017 - 2022 (expected)

Los Angeles, CA

TIANJIN UNIVERSITY (TJU)

BS IN CHEMICAL ENGINEERING

2013 - 2017 | Tianjin, China

GPA: 3.70 / 4.0

COURSEWORK

Analysis of Algorithms

Machine Learning

Applied Natural Language Processing

Database Systems

Numerical Analysis and Computation

Operating Systems

Web Technologies

Modeling and Analysis of Chemical

Engineering Systems Computational

Materials

SKILLS

PROGRAMMING

Proficient:

Python • Javascript • Java • HTML5/CSS

• MySQL • C

Familiar:

C++ • Matlab • \LaTeX

TECHNOLOGY

Android • Amazon Web Services (AWS) •

Google APP Engine (GAE) • Linux •

PyTorch • scikit-learn • Node.JS •

React.JS • Android Studio

EXPERIENCES

Research Assistant 2017-present

USC Viterbi Engineering School

Research Mentor 2018-2019

Viterbi Summer Undergraduate Research Experience (SURE)

Summer High School Intensive in Next-Generation Engineering (SHINE)

Math Tutor 2018

Volunteered as a math tutor for Linear Algebra at LA Trade Tech College

Research Intern at Harvard University

2016 - 2017

PROJECTS

MOBILE APP DEVELOP: ANDROID NEWS APP (demo) 2020

- Developed an Android application that allows users to search, read, bookmark and share latest news. Designed and implemented a real-time trending chart on searched keywords.
- Implemented back-end using Node.JS on AWS to request news data from Guardian News API, New York Times News API and front-end using React.JS on GAE for the realization of multiple tabs, search functionality, swipe refresh, process bar, RecyclerView, etc.

WEB DEVELOP: RESPONSIVE NEWS WEBSITE (demo) 2020

- Developed a responsive news website for browsing New York Times and Guardian news with auto-suggest feature for search box, a comment box, labels and share buttons for each piece of news.
- Technologies used: AJAX/JSON/HTML5/React-Bootstrap/React.JS/Node.JS/AWS/GAE

NLP: EVENT TEMPORAL RELATION EXTRACTION 2019

Implemented a neural-network based biLSTM classifiers that leverages contextualized embedding models (BERT, RoBERTa, and XL-Net) to determine pair-wised temporal relation between events for natural language comprehension.

NLP: NAME ENTITY RECOGNITION 2019

Implemented logistic regression classifier with Viterbi algorithm for sequence tagging to perform supervised named entity recognition for Twitter data.

RESEARCH

MACHINE LEARNING: CHEMICAL PROPERTY PREDICTION

2018 - 2018 | Sharada Lab, USC

- Built linear regression and random forests to predict chemical properties for QM9 Google Database which contains more than 130,000 molecules using SMILES as the feature.
- Obtained accurate predictions of chemical properties that are comparative to DFT calculations.

AWARDS

2020 TLARGI fellowship, the Los Angeles Rubber Group Inc.

2019 WiSE Travel grant, USC

2017 Viterbi/Graduate School Merit Fellowship, USC

2016 Ten-month Fellowship for Undergraduate Thesis Program at Harvard, TJU

2016 National college student chemical engineering design competition: The 1st prize of Northern China

2015 Qiushi Honors School Outstanding Student Scholarship, TJU

PUBLICATIONS

- Lan, Z., Mallikarjun Sharada, S. (2020). *Physical Chemistry Chemical Physics*. 22.14, 7155-7159. **(2020 HOT article)**
- Lan, Z., Mallikarjun Sharada, S. (2018). *Physical Chemistry Chemical Physics*, 20(40), 25602-25614. **(2018 HOT article)**
- 7 conference presentations.