Shuo Yan 闫硕

S201625034@emails.bjut.edu.cn   yanshuok.github.io

Education

- **MSE, School of Software, Beijing University of Technology (BJUT), Beijing, China**   09/2016 - 07/2019
    - Overall GPA: 3.5/4.0, 10%; Advisor: Bo Liu
- **B.E., School of Software, Beijing University of Technology (BJUT), Beijing, China**   09/2012 - 07/2016
    - Overall GPA: 3.21/4.0; 30%

Awards

- Third Prize, Innovation on Technology of BJUT (four times)   2017~2019
- First Prize, Innovation on Technology of BJUT   2019
- Outstanding Graduate Paper of BJUT (top 10%)   05/2019
- Outstanding Graduate of BJUT (top 5%)   05/2019
- Second-Class Scholarship of BJUT (consecutive two times, top 20%)   2013~2015
- Bronze Award, Challenging Cup of BJUT   2015

Publications

[1] Bo Liu, **Shuo Yan,** Jianqiang Li, Yong Li, Jianlei Lang, Mengchu Zhou, " Study on Prediction of Atmospheric PM2.5 Based on Spatio-Temporal Extreme Learning Machine: Case of Beijing", IEEE Transactions on Big Data (under second review)

[2] Bo Liu, **Shuo Yan,** Jianqiang Li, Guangzhi Qu, Yong Li, Jianlei Lang, Rentao Gu, " A Sequence-to-Sequence Air Quality Predictor Based on the n-Step Recurrent Prediction", IEEE Access 2019 (IF= 4.098, Q1)

[3] Bo Liu, **Shuo Yan**, Jianqiang Li, Guangzhi Qu, Yong Li, Jianlei Lang, Rentao Gu, " An Attention-Based Air Quality Forecasting Method", IEEE, International Conference on Machine Learning and Applications (ICMLA 2018)

[4] Bo Liu, **Shuo Yan**, Huanling You, Yan Dong, Yong Li, Jianlei Lang, Rentao Gu, " Road surface temperature prediction based on gradient extreme learning machine boosting", Elsevier, Computers in Industry 2018 (IF= 4.769, Q1)

[5] Bo Liu, **Shuo Yan,** Huanling You, Yan Dong, Yong Li, Jianlei Lang, Rentao Gu, "Road surface temperature prediction based on gradient extreme learning machine boosting" IEEE, International Conference on Machine Learning and Applications (ICMLA 2017)

[6] Bo Liu, **Shuo Yan**, Jianqiang Li, Yong Li, "Forecasting PM2. 5 concentration using spatio-temporal extreme learning machine" IEEE, International Conference on Machine Learning and Applications (ICMLA 2016)

Skills

- **Proficient** in Python, Java, Javascript, Html, Spring, SQL, Tensorflow
- **Familiar** with, Matlab, Neo4j, Spark, Linux, Pytorch

English Proficiency

- **GRE** (April. 27th, 2019): Total: 323 (V: 155, Q: 168) AW: 3
- **TOEFL** (July. 6th, 2019): Total: 102 (R: 29, L: 27, S: 23, W: 23)

Selected Research & Projects

- **Road Surface Temperature Prediction**   11/2016 - 05/2017
  KEYWORDS: Prediction; Machine Learning; Data Mining
  Registered one national-level patent in China
  Under the guidance of Prof. Dr. Bo Liu
  Use Neural Networks based models to predict the road surface temperature of next 24 hours
  Use ensemble methods to enhance the performance

- **Air Quality Prediction [1]**   07/2016 – 03/2019

  KEYWORDS: Prediction; Machine Learning; Data Mining

  Registered two national-level patents and one software copyright in China; Guided by Prof. Dr. [Bo Liu](#)

  Wrote papers and do some experiment based on machine learning and deep learning method

  Design and build a deep learning based air quality prediction system

  Proposed a seq2seq based method to predict air quality

  Significantly reduce the training time of seq2seq and improve the accuracy

- **Improving the accuracy of question searching system [2]**   08/2017 - 09/2017

  KEYWORDS: Cluster; Classification; Text mining; Data Mining

  Identified the missing question by machine learning based classifier with labeled data

  Use cluster method to identify the highly frequent missing question

  Use highly frequent missing question to expand the question database

- **Deduplication of question database [5]**   10/2017 - 11/2017

  KEYWORDS: Text similarity, Text Mining

  Use text mining techniques to vectorize the questions

  Use various text similarities to identify the duplicated question

  Build web service for other's usage

- **Knowledge point classification [3]**   12/2017 - 05/2018

  KEYWORDS: Text Classification; Text Mining; Data Mining

  Use deep learning and other machine learning based methods

  Also try to use reinforcement learning to integrate word segmentation and classification

Work Experience

- **Data Mining Intern at Xuebajun, Beijing**   08/2017-08/2018

  KEYWORDS: Software Engineering; Data Mining; Text Mining

  Explored how to enhance the performance of the service about question database by text mining

  Provide some web services of text mining algorithms

- **Data Mining Intern at China Academy of Science Institute of Automation, Beijing**   07/2019-present

  KEYWORDS: Text Mining, Knowledge Graph, Data analysis

  Build Knowledge Graph about the information of companies

  Provide some web services of text mining algorithms