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, top 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; Major 3.4/4.0

Awards

- First Prize, Innovation on Technology of BJUT   2019
- Outstanding Master Thesis 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
- Third Prize, Innovation on Technology of BJUT (four times)   2017~2019
- 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
  Published 2 papers and registered one national patent in China
  Under the guidance of Prof. Dr. Bo Liu
  Used Neural Networks based models to predict the road surface temperature of the next 24 hours

Used 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
  Published 3 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 of the searching system by machine learning based classifier with labeled data
  Used clustering method to identify the highly frequent missing question
  The highly frequent missing questions are used to expand question database
  Built a service which can identify highly frequent missing question every day automatically

- **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 a web service for new imported questions

- **Knowledge point classification [3]**   12/2017 - 05/2018
  KEYWORDS: Text Classification; Text Mining; Data Mining
  Use deep learning and other machine learning based methods
  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 a Knowledge Graph about the information of companies
  Provide some web services of text mining algorithms