Minghao **Wu**

Beijing, P. R. China

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Education

The University of Melbourne

Melbourne, Australia

Master of Information Technology

Mar. 2016 - Jul. 2018

- Specialization in Computing

The University of Sydney

Sydney, Australia

B.S. in Statistics & Information Systems

Mar. 2013 - Mar. 2016

- Most of statistics and mathematics subjects are in Advanced stream.

Core Skills

Solid background in listed areas

- Python/R
- PyTorch: Conduct academic research and publish novel work to top conference; Reproduced a few well-known models from scratch. Available at https://github.com/minghao-wu/DeepLearningFromScratch
- Machine Learning algorithm, such as Logistic Regression, Naive Bayes, Decision Tree, Support Vector Machine, etc. and Deep Learning model, such as Convolutional Neural Network
- Statistical Analysis skills, such time series analysis, linear models, multivariate analysis, etc.

Projects

Natural Language Processing Not-At-All from Scratch: Evaluating The Utility of Hand-crafted Features in Deep Learning

The University of Melbourne

Keywords: Natural Language Processing, PyTorch, Name Entity Recognition

Mar. 2018 - May. 2018

- Propose a novel neural architecture for utilizing hand-crafted features in Deep Learning models.
- Obtain F_1 of 91.89 on CoNLL 2003 English shared task, setting a new state of the art.
- This work is submitted to EMNLP 2018, the second best conference in NLP.
- Code will be released after the acceptance result is released.

Statoil/C-CORE Iceberg Classifier Challenge

Beijing, P.R.C

Keywords: Computer Vision, PyTorch, Convolutional Neural Network

Oct. 2017 - Nov. 2017

- Investigate the background knowledge in ship-iceberg classification, build Convolutional Neural Networks in PyTorch and ensemble models.
- Rank top 5% (134/2794) in public leaderboard for best record and finally rank at 475/3189 up to 10/1/2018.

PHM Data Challenge 2017

K2Data Ltd.

Keywords: Data Analysis, Machine Learning, Regression, R

Apr. 2017 - Aug. 2017

- Investigate the background knowledge.
- Perform Data Visualization.
- Try thousands of combinations of given features to preform feature engineering.
- Perform LOESS regression.
- Win the first place of the competition, and write an invited paper (not published yet).

Experience

K2Data Ltd.

Beijing, P.R.C

Machine Learning Internship

Mar. 2017 - Dec. 2017

- Win the first place of PHM Data Challenge 2017 and publish the invited paper "Similarity-based Fault Detection in Vehicle Suspension System".
- Develop internal-use package rPAS and PyPAS in R and Python.
- Develop Visual-based Alerting System, SmartFence, using TensorFlow Object Detection API.
- Develop Safety Helmet Detection system, iSee, using TensorFlow Object Detection API.

School of Public Health, University of Sydney

Sydney, Australia

Research Assistant

Sep. 2015 - Feb. 2016

- Pre-process and visualize the data.
- Apply variable selection techniques borrowed from Machine Learning literature to a clinical setting using R.
- Write scientific documents describing the results.

School of Information Technology, University of Sydney

Sydney, Australia

Mentor

Feb. 2014 - Jul. 2014

- Plan, evaluate and revise course content and course materials.
- Supervise and evaluate students' laboratory work.
- Point students to relevant information about academic and personal support services available at the university.

Additional Information

Languages Skills

Self assessment - Common European Framework of Reference level

- Chinese: Mother tongue
- English: Listening C1, Reading C2, Spoken Interaction C1, Spoken Production C1, Writing B2 (equivalent to IELTS 7.5 - 8.0)

Postgraduate Academic Supervisors

Complete the final project under supervision

- Prof. Trevor Cohn: Assoicate Professor at The University of Melbourne
  trevor.cohn@unimelb.edu.au