Miao Feng

Blog: https://skaudrey.github.io • Email: fengmiao16@nudt.edu.cn • +86 132 7223 6003
National University of Defense Technology, Wuhan University • Changsha city, Hunan province, China

Education

- **National University of Defense Technology** **Changsha city, China**
  College of Computer Science and Technology, M.E., Computer Science and Technology. *9/2016 – Present*
  - My main research interests are data analysis, graphical deep learning and the theory of machine learning.
  - Final GPA: 3.5/4.0.
  - Thesis: The Study of Typical Applications in Weather Forecasting Based on Machine Learning.
  - Relevant courses: CS229, CS231n, Linear Algebra.
  - Relevant reading: *Gaussian Process for Machine Learning*, *Deep Learning*, *PRML*.
- **Wuhan University** **Wuhan city, China**
  International School of Software, B.E., Spatial Informatics and Digitalized Technology (major). *09/2012 – 06/2016*
  - Final GPA: 3.6/4.0.
  - Thesis: *Fast Satellite Image Storage and Plugin Development Based on HDFS.*
  - Relevant courses: Statistics, Fundemental of Physics, Advanced Mathematics, Linear Algebra.
- **Wuhan University** **Wuhan city, China**
  Economics and Management School, B.S., Finance (minor). *09/2013 – 06/2016*
  - Final GPA: 3.1/4.0.
  - Thesis: *Implications of the Financial Crisis Inherent Defects from International Monetary System and Some Advice.*

Languages and Technologies

Programming Languages: Python, Java, C++, LaTeX, Matlab, JavaScript, SQL
Technologies: SciPy, NumPy, Keras, TensorFlow, scikit-learn, UNIX, Git
Natural Languages: Fluent in Chinese and English, beginner in French and Japanese.

Projects

- **Naive Implementations of Some Popular Machine Learning Algorithms.** *03/2018 – Present*
  - Naive implementations of some M.L. algorithms, which are updated continuously[1].
- **HCR–Compress and Resonstruct Hyperspectral Data.** *10/2018*
  - A network for compressing and reconstructing infrared hyperspectral data, named HCR, is proposed[2].
- **Clouds Detection of Infrared Hyperspectral Data Based on Logistic.** *04/2018*
  - Detect whether infrared atmospheric sounding interferometer's (IASI's) instantaneous fields of view (IFOVs) are covered by clouds. Based on the proposed feature construction method, cloudy IFOVs are detected by logistic regression in real time[3].
- **Interpolating Weather Processes Based on Gaussian Process Regression.** *06/2017–08/2017*
  - Interpolating wind fields. Design a multi-scale anisotropy kernel for weather processes, and two multivariate models for interpolating weather processes with and without cyclones are proposed[4].

Publications

1. **Feng M**, Zhang W, Zhu X, et al. Multivariate Interpolation of Wind Field Based on Gaussian Process Regression[J]. Atmosphere, 2018, 9(5):194.

[1] https://skaudrey.github.io/posts/projects/2018-11-16-ml-implement.html
[2] https://skaudrey.github.io/posts/projects/2018-11-16-hcr.html
[3] https://skaudrey.github.io/posts/projects/2018-11-16-lr.html
[4] https://skaudrey.github.io/posts/projects/2018-11-11-gpr.html

Talks

- Discussion about Data Assimilation and Machine Learning, Sep. 11th, 2017.[5]
- Multivariate Interpolation of Wind Fields Based on Gaussian Process Regression, Jan. 24th, 2018.[6]
- The Introduction of Infrared Hyperspectral Data and Kernel PCA, Jun. 5th, 2018.[7]
- What Can Artificial Intelligence Do in Data Assimilation? Dec. 9th, 2018.[8]

Acdemic Activities

- **The International Summer School on Applied Mathematics:** Machine Learning, Deep Learning, Data Assimilation, Statistical Inference in high dimensions.[9].
- **Computing in the 21th Century & Asia Faculty Summit:** Microsoft, Computer Science, AI, Computational biology.[10].

Internship Experience

- **Meituan-Dianping Company** **Beijing City, China**
  Research and Development Engineer, Fintech *07/2018 – 09/2018*
  - I was on duty of anti-fraud detection using machine learning algorithms.
  - I proposed three patents related to anti-fraud detection, identification detection and intention detection. The patents have been accepted by Meituan-Dianping, and will be filed with the patent office laterly.[11].

Certificates and Awards

- 3rd prize, The 13th MCM of Master *09/2016*
- Excellent Graduate *06/2016*
- National Scholarship *08/2015*
- Outstanding Student Leader *08/2015*
- 2nd Prize, COMAP's MCM *02/2015*

[5] https://skaudrey.github.io/posts/talks/2018-11-12-da+talk.html
[6] https://skaudrey.github.io/posts/talks/2018-11-16-gpr-talk.html
[7] https://skaudrey.github.io/posts/talks/2018-11-12-hyp+talk.html
[8] https://skaudrey.github.io/posts/talks/2018-12-10-mlutility+talk.html
[9] https://skaudrey.github.io/posts/meetings/2018-11-13-harbin.html
[10] https://skaudrey.github.io/posts/meetings/2018-11-13-microsoft.html
[11] https://github.com/skaudrey/cv/blob/master/patent/list.png