

Miao Feng

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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, Fundamental 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: 3.0/4.0.
 - Thesis: *Implications of the Financial Crisis Inherent Defects from International Monetary System and Some Advice.*
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Languages and Technologies

Programming Languages: Python, Java, C++, L^AT_EX, 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 continuously¹.
 - **HCR-Compress and Resonstruct Hyperspectral Data.** 10/2018
 - A network for compressing and reconstructing infrared hyperspectral data, named HCR, is proposed².
 - **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 time³.
 - **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 multi-variate models for interpolating weather processes with and without cyclones are proposed⁴.
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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.
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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

Academic 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>

冯淼

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国防科技大学, 武汉大学 • 湖南长沙, 中国

教育

- **国防科技大学** 中国长沙
计算机科学与技术学院, 工学硕士, 计算机科学与技术专业 9/2016 – 至今
 - 主要研究兴趣为数据分析, 图深度学习, 机器学习基础。
 - GPA: 3.5/4.0.
 - 毕设: 机器学习在天气预报的典型应用研究
 - 相关课程: CS229, CS231n, 线代.
 - 相关阅读: *Gaussian Process for Machine Learning*, *Deep Learning*, *PRML*.
- **武汉大学** 中国武汉
国际软件学院, 工学学士, 空间信息与数字技术 (主修) 09/2012 – 06/2016
 - GPA: 3.6/4.0.
 - 毕设: 基于 *HDFS* 的卫星影像快速存储与插件开发
 - 相关课程: 统计、物理基础、高数、线代。
- **武汉大学** 中国武汉
经济与管理学院, 理学学士, 金融学 (辅修) 09/2013 – 06/2016
 - GPA: 3.0/4.0.
 - 毕设: 金融危机的启示——国际货币体系的内在缺陷及改进方法

语言与技能

编程语言: Python, Java, C++, L^AT_EX, Matlab, JavaScript, SQL
技能: SciPy, NumPy, Keras, TensorFlow, scikit-learn, UNIX, Git
外语: 精通汉语、英语, 法语、日语入门。

项目

- 常见机器学习算法的简单实现 03/2018 – 现在
 - 一些常见机器学习算法的原型实现, 持续更新中。¹
- HCR-压缩、重构红外高光谱数据 10/2018
 - CNN 网络, 取名为 HCR, 用于压缩与重构红外高光谱数据。²
- 基于 logistic 的红外高光谱资料云检测 04/2018
 - 检测 IASI (红外大气探测干涉仪) 的 IFOVs (瞬时视场) 是否被云覆盖。基于提出的特征构建方法, 采用 logistic 算法对视场进行实时检测。³
- 基于高斯过程回归的天气过程插值 06/2017–08/2017
 - 插值风场。为天气过程设计了多尺度各向异性核函数, 并且针对有气旋天气过程和无气旋的天气过程分别设计了多变量插值模型⁴。

论文

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.

报告

- 资料同化与机器学习关系的讨论, 09/11/2017。⁵

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>

⁵<https://skaudrey.github.io/posts/talks/2018-11-12-da+talk.html>

- 基于高斯过程的风场多变量插值, 01/24/2018。⁶
- 红外高光谱数据与 KPCA 介绍, 01/05/2018。⁷
- 人工智能在资料同化中可以做什么? 12/09/2018。⁸

学术活动

- 国际应用数学暑期学校: 机器学习, 深度学习, 资料同化, 高维统计推断。⁹
- 二十一世纪的计算学术研讨会: 微软, 计算机科学, AI, 计算生物学。¹⁰

实习经历

- 美团点评 北京, 中国
算法研发, 金融反欺诈 07/2018 – 09/2018
 - 负责利用机器学习算法进行金融反欺诈行为检测。
 - 在岗期间提出了三项专利, 分别涉及发欺诈检测、身份识别与意图鉴定, 均已被美团点评公司录用。后续会成文递交至专利局。¹¹

奖励

- 三等奖, 第十三届全国研究生数学建模竞赛 09/2016
- 优秀毕业生 06/2016
- 国家奖学金 08/2015
- 校级优秀学生干部 08/2015
- 二等奖, 美国大学生数学建模竞赛MCM 02/2015

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>