

徐举

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教育经历

- 北京大学** 硕士研究生
数据科学中心 · 数据科学 2017.09 – 2020.06
 - 专业课程: 数据科学, 机器学习, 深度学习, 强化学习, 凸优化, 大数据分析算法等。
 - 荣誉称号: 国家奖学金, 三好学生标兵。
- 中国人民大学** 本科生
信息学院 · 数学与应用数学 2013.09 – 2017.06
 - 专业课程: 数据分析, 高等代数, 概率论, 数理统计, 数据结构, C 语言, 操作系统等。
 - 荣誉称号: 一等奖学金, 三好学生。

实习经历

- Microsoft Research Asia** *Research Intern* 2018.07 – 至今
 - 使用贝叶斯优化算法, 研究并开发适合 Azure 云平台 prediction service 的 autoML 程序。
 - 对 Azure 云平台的 disk 检测数据进行建模, 预测 disk 是否会发生故障。
- 中国电信北京研究院** 数据挖掘实习生 2016.09 – 2016.12
 - 使用 hadoop 平台分析用户在电商网站的购买点击流数据, 探究用户购买决策过程, 建立机器学习模型分析购买影响因素, 并撰写论文《基于运营商跨平台同源数据的购物决策路径研究》, 发表在《电信技术》, 并获得第十六届“中国市场研究宝洁论文奖”优秀论文。

科研经历

- Xu J, Zhu Z. Reinforced Continual Learning. NIPS 2018.**
 - Continual Learning 是指一个模型具有学习多个任务, 并且学习完新的任务后还能够不遗忘之前的任务的能力。之前的解决方案大多从学习新模型时调整原有模型参数来适应新模型, 并通过正则化, 贝叶斯先验等角度来对参数的调整大小进行限制这些角度出发。然而, 这些方法会不可避免的造成对之前任务的遗忘。本文通过使用强化学习, 根据新任务的难易程度动态地对网络进行扩展, 使用网络中扩展的部分对新任务进行学习。实验表明, 本文提出的方法不仅取得了更好的准确率, 而且能够得到更加稀疏的网络结构, 从而能够减少 inference 时间。
- Xu J, Zhu Z. Bayesian Optimized Continual Learning with Attention Mechanism. Submitted to AAAI 2019.**
 - 之前的 continual learning 模型在使用先验知识的时候分为两种, 一种是直接对先验知识进行微调, 另一种是不改变先验知识, 直接使用。第一种方法由于改变了先验知识, 会造成对之前任务的遗忘, 第二种方法由于没有对先验知识进行任何修改, 会使得之前的知识对新任务的学习有影响。本文提出了一种新的使用先验知识的方法, 并且使用贝叶斯优化对网络进行扩张, 增加学习的效率。
- Chen R, Xu W, Zheng Y, Xu J. Credit Evaluation for Online Secondhand Sellers. SIGBPS 2016 Workshop on Business Processes and Services.**
 - 二手商家的信用评分对于购买用户来说非常重要, 准确的商家信用评分能够减少欺诈事件发生, 并且优化用户的体验。本文通过使用主题模型提取商家特征, 并建立机器学习模型, 对二手商家的信誉进行评分, 从而为买家关于商家信誉的评价提供支持。

技能专长

- C, C++, python, Tensorflow, pytorch, linux; Machine Learning, Deep Learning, Reinforcement Learning, Convex Optimization.

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Education

- **Peking University** Master
Center for Data Science·Data Science 2017.09 – 2020.06
 - Lessons: Data science, Machine learning, Deep learning, Reinforcement learning, Convex optimization, Algorithms in big data analysis.
 - Honours: Graduate National Scholarship, Pacemaker to Merit Student.
- **Renmin University of China** Bachelor
School of Information·Mathematics 2013.09 – 2017.06
 - Lessons: Calculus, Linear Algebra, Probability theory, Data structures, Programming in C.
 - Honours: First class scholarship, Merit Student.

Intern

- **Microsoft Research Asia** *Research Intern* 2018.07 – now
 - Construct an automatic machine learning program for Azure based on Bayesian optimization.
 - Research a model for disk failure prediction.
- **China Telecom, Beijing Research Institute** *Data Mining* 2016.09 – 2016.12
 - Analyze the user' s purchase click stream data on the e-commerce website, explore the user' s purchase decision process, model and analyze the purchase influencing factors, and write the paper “Study on the Shopping Decision Path Based on Operators' Cross-platform Source Data”, published in “Telecommunications Technology” . And won the 16th ” China Market Research P & G Paper Award” outstanding papers.

Research

- **Xu J, Zhu Z. Reinforced Continual Learning. NIPS 2018.**
 - Continual learning is the ability to learn consecutive tasks without forgetting how to perform previously trained tasks. In this work, a novel approach for continual learning is proposed, which searches for the best neural architecture for each coming task via sophisticatedly designed reinforcement learning strategies. We name it as Reinforced Continual Learning (RCL). The experiment results show that RCL can obtain better performance than existing methods even with adding much less units.
- **Xu J, Zhu Z. Bayesian Optimized Continual Learning with Attention Mechanism. Submitted to AAAI 2019.**
 - The previous continuous learning model is divided into two types when using prior knowledge. One is to directly fine-tune the prior knowledge, and the other is to use the prior knowledge without changing it. The first method will cause forgetting of the previous task. The second method will make the previous knowledge have an influence on the learning of the new task. This paper proposes a new method of using prior knowledge, and uses Bayesian optimization to expand the network and increase the efficiency of learning.
- **Chen R, Xu W, Zheng Y, Xu J. Credit Evaluation for Online Secondhand Sellers. SIGBPS 2016 Workshop on Business Processes and Services.**
 - The credit score of second-hand merchants is very important for the purchaser, and accurate merchant credit scores can reduce fraud and optimize the user experience. This article supports the evaluation of the merchant's reputation by using the topic model to extract the merchant characteristics and establish a machine learning model to score the reputation of the second-hand merchant.

Skills

- C, C++, python, Tensorflow, pytorch, linux, Machine Learning, Deep Learning, Reinforcement Learning, Convex Optimization.