Liangwei Li

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EDUCATION

Shanghai Jiao Tong University   *Sep 2016 - Jun 2020*

Bachelor of Engineering in Information Engineering & Bachelor of Arts in French   *Shanghai*

- GPA: First Year: 4.04/4.30 (Top 5%)

    Second Year: 3.94/4.30(Top 5%)

PUBLICATIONS

Combinational Q-Learning for Dou Di Zhu

Yang You, **Liangwei Li**, Baisong Guo, Weiming Wang, Cewu Lu [arXiv]

Under Review, 2019

A Data Driven Energy Profile Evaluation and Prediction System

Liangwei Li, Haolin Pan, Yiming Qin [pdf]

The Mathematical Contest in Modeling (MCM), 2018, Meritorious Winner

RESEARCH EXPERIENCES

Hierarchical Deep Reinforcement Learning Framework for Board Games   *Aug 2018 - Jan 2019*

Shanghai Jiao Tong University - Machine Vision and Intelligence Group

Undergraduate Member

- Designed a Node-Weight based Algorithm implemented by C++ for the Chinese card game: Doudizhu(斗地主). The winning rate against real persons is above 40%
- Proposed a hierarchical reinforcement learning framework based on Deep Q Network using Tensorflow. Designed a model based on this framework and got a winning rate of more than 50% against the Monte-Carlo Tree Search method

INTERN EXPERIENCE

Beijing Wecash Wonder Technology Co., Ltd.   *Jul 2018 - Aug 2018*

Machine Learning Intern, Data Model Department   *Beijing*

- Assist in the completion of the feature engineering migration task of user data, responsible for the feature construction of user data from Eleme data sources (These Features relate to the location of the order, the number of orders, order amount, etc.)
- Made a jupyter-notebook extension using Tornado with which one can deploy the currently editing file onto a server (view on my Github)
- Monitored and visualized a MySQL database, where 1,000,000+ user data were involved

PROJECT EXPERIENCES

COMAP's Mathematical Contest in Modeling (MCM)   *Feb 2018 - Feb 2018*

Meritorious Winner (First Prize)   *Shanghai*

- Developed a mathematical model based on 687 energy-related data of California, Arizona, New Mexico, and Texas over the past 50 years
- Succeeded in scoring and evaluating the energy use of each state in each year to build 4 energy profiles with the Collaborative Filtering Algorithm

Asia and Pacific Mathematical Contest in Modeling   *Nov 2017 - Nov 2017*

First Prize   *Shanghai*

- Designed a model describing the relation between patients' sleep diseases and their own characteristics such as age, sex,

sleep time and other features of 5,000 sleep disorders

- Implemented a Decision Tree Algorithm to predict the possible diseases of patients

Dorahacks Hachthon   *Sep 2017 - Sep 2017*

First Prize, Enterprise Award   *Shanghai*

- Crawled user data of MaiMai(脉脉) APP (with permission) using Requests library and Selenium library
- Analyzed one user's connection quality by the depth, width, influence and activity of his connection and drawn the user profile accordingly

SELECTED HONORS & AWARDS

- Technology Innovation Scholarship   *Nov 2018*
- Excellent Academic Award   *Oct 2018*
- Meritorious Winner of The Mathematical Contest in Modeling (MCM)   *Apr 2018*
- Bronze Medal of Google Cup Entrepreneurship Competition   *Dec 2017*
- Ardien Enterprise Award   *Nov 2017*
- Shanghai Jiaotong University Merit Student   *Oct 2017*
- Dorahacks First Prize   *Sep 2017*

李良伟

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个人主页：liangweilee.com

教育经历

上海交通大学   2016年9月 - 2020年6月

信息工程、法语 本科   上海

GPA：第一学年：4.04 / 4.30（专业前%5）

　　　第二学年：3.94/4.30（专业前5%）

科研成果

Combinational Q-Learning for Dou Di Zhu

Yang You, Liangwei Li, Baisong Guo, Weiming Wang, Cewu Lu [arXiv]

正在评审, 2019

A Data Driven Energy Profile Evaluation and Prediction System

Liangwei Li, Haolin Pan, Yiming Qin [pdf]

The Mathematical Contest in Modeling (MCM), 2018, Meritorious Winner

研究经历

Hierarchical Deep Reinforcement Learning Framework for Board   2018年8月 - 2019年1月
Games

上海交通大学机器视觉与智能实验室

研究成员

- 使用C++实现了基于手牌权重计算的AI脚本自动进行斗地主，与真人对抗能取得40%以上的胜率
- 使用Tensorflow搭建基于深度Q-Network的强化学习框架，正在探索将框架应用于物体检测和斗地主这两项任务。其中斗地主模型与蒙特卡洛树搜索模型相比能达到50%以上的胜率

实习经历

闪银奇异科技有限公司   2018年7月 - 2018年8月

机器学习实习生 数据模型组   北京市

- 协助完成用户数据的特征工程迁移任务，负责来自于饿了么数据源的用户数据的特征构建。特征涉及订单所在地，订单数目，订单金额等25维度
- 制作基于Tornado框架的jupyter-notebook插件，能够将jupyter-notebook当前编辑的文件部署到远程服务器上(项目地址)
- 使用Prometheus+Grafana实现了对Mysql数据库数据的监控和可视化任务，数据涉及百万级别规模的用户

项目经历

美国大学生数学建模比赛   2018年2月 - 2018年2月

一等奖   上海市

- 根据美国加利福尼亚州、亚利桑那州、新墨西哥州和德克萨斯州在过去50年间的687种与能源相关的数据，建立能源使用情况的模型
- 使用协同过滤算法，对每一个州在每一年的能源使用情况进行评估打分，构建能源使用画像
- 对四个州未来的能源使用情况进行预测，并提供相应的策略

亚太杯数学建模比赛   2017年11月 - 2017年11月

一等奖   上海市

- 根据5000名睡眠障碍患者的年龄、性别、睡眠时间等数据，建立睡眠疾病和患者自身特点的模型

- 使用决策树算法完成模型训练，绘制权重图像并对未知疾病类型的患者进行患病预测
- 根据模型结果和不同患者的实际情况给出改善建议

Dorahacks编程马拉松   2017年9月 - 2017年9月
一等奖 企业奖   上海市

- 使用Python的requests和selenium框架进行爬虫任务，抓取了脉脉用户的一度和二度人脉数据
- 使用决策树算法对爬取到的数据进行分析，从人脉深度、人脉广度，人脉活跃度，人脉影响力4个维度分析特定用户的人脉质量，并对其进行打分，最终使用雷达图和词云的方式呈现结果

荣誉奖项

- 荣昶科技创新奖学金   2018年11月
- 优秀学业奖学金   2018年10月
- 美国大学生数学建模比赛一等奖   2018年4月
- 谷歌杯创业大赛铜奖   2017年12月
- Ardien企业一等奖   2017年11月
- Dorahacks编程马拉松一等奖   2017年9月