于晓飞

个人主页：https://xiaoffy.netlify.app/
+86 18742523642 | xiaofei_66@buaa.edu.cn | 北京市
求职意向：**机器学习算法实习生**

教育经历

北京航空航天大学　　交通运输工程　　研究生　　2020.9-2023.1
主修课程：交通大数据技术、数据分析与挖掘、现代控制理论、交通数据建模与分析、数理统计
所获荣誉：专业奖学金

大连海事大学　　航海技术(实验)　　本科　　2016.9-2020.6
主修课程：运筹学、数据结构与算法、高等数学、线性代数、概率论与数理统计、复变函数与积分变换
所获荣誉：大连市优秀毕业生

项目经历

重庆市主城区公共交通动态判断与对策研究（学生骨干，阿里巴巴高德地图项目合作实习生）　2021.4-2021.9

- 作为学生主力，与高德对接，梳理**静态指标**，**出行体验指标**和**通勤指标**三大部分指标计算文档与报告大纲.
- 驻场高德地图和重庆城市交通投资开发集团，利用 python 和 QGIS，处理并可视化线路数据和海量通勤数据.
- 从**公共交通基础设施建设**，**居民出行**和**通勤分析**方面，按重庆中心城区，内环区和热点区三个层级展开分析.
- 主导五个热点区通勤分析，挖掘通勤需求与公共交通供给间的关系，给出优化建议，部分建议已经**落地实施.**

公交线网可视化平台搭建(主要负责人)　　2021.03-2021.11

- 独立设计并搭建公交可视化系统前端界面，技术栈 JavaScript，HTML，CSS，所用框架 Vue。
- 调取高德 API 可视化指定公交线路图并区分上下行的原始线路图，通过优化处理后的 POI 坐标点绘制优化后的路线，并对优化前后的线路和指标的对比来展示优化线路的效果。
- 设计搭建交通路网态势检测解析系统，对北京市道路事故进行分析展示，并显示事故影响排名以及详细信息。

“华为杯”研究生数学建模竞赛（队长）　　2021.10

- 所选研究问题是航空公司机组排班问题，对航空公司员工排班进行组合优化实现资源高效配置。通过线性加权方法构建多目标优化函数，构建混合整数规划模型精确描述问题，设计启发式算法求解。
- 通过构建启发式算法框架创新性提出基于禁忌规则的“解编和组编”优化思路，具有较高适用和推广性。

科研专利

[1] Evaluating and Predicting road network resilience using traffic speed and log data(EI, First Author)，CICTP2022
[2] 城市交通状态与安全态势协同关联分析平台，软件著作权，登记号：2022SR0188253。

竞赛获奖

[1] 2018.11 全国大学生数学竞赛　　全国三等奖
[2] 2018.11 全国大学生数学建模竞赛　　辽宁省二等奖
[3] 2021.12 “华为杯”全国研究生数学建模竞赛　　全国三等奖

专业技能

- 熟悉机器学习多种算法及数学推导过程，熟悉其在数据挖掘与分析中的相关操作。
- 熟悉并掌握 Python 语言及其相关数据结构和算法相关领域。熟悉使用 PyTorch 等深度学习框架。
- 熟悉数据库的基本原理及设计和 SQL 语言简单使用。

Xiaofei Yu

Intentional position: **Machine Learning Intern**

+86 18742523642 xiaofei_66@buaa.edu.cn xiaoffy.netlify.app xiaofei-fei

Education

Beihang University (BUAA) **Sep. 2020 – Jan. 2023**

Master of Transportation Engineering *China, Beijing*

Dalian Maritime University (DMU) **Sep. 2016 – June. 2020**

Bachelor of Nautical Science ***(Elite Class)*** *China, Dalian*

Honors: **Outstanding Graduate in Dalian**

Relevant Coursework

- Data Structures and Algorithms
- Transportation big data
- Traffic Data Modeling and analysis
- Data analysis and mining
- Mathematical Statistics
- Complex function

Projects

Research on Dynamic Judgment and Countermeasures of Public Traffic in Chongqing | ***Core member***

Core Member of the team, Alibaba Gaode AMAP Project Cooperative Intern **April 2021**

- Cooperate with Gaode Map,define the necessary indicators and participate in the development of the **project outline.**
- Working in Gaode Map and Chongqing Urban Transport Investment and Development Group to process and visualize route basic data and massive commute positioning data with **Python** and **QGIS**.
- Large-scale data analysis of public transportation, residents' commuting and travel experience in Chongqing area.
- **Propose suggestions** for traffic route optimization in Chongqing,some of the recommendations have been **implemented** and **achieved significant results**,which is popular among residents.

Visualization platform construction of bus line network | ***Person In Charge*** **March 2021**

- Independently design and build the front-end interface of the bus visualization system, the technology stack includes **javascript, html, CSS** , and the framework **Vue** is used. Website1
- Call the Gaode api to visualize the designated bus route map and distinguish the original route map between the upstream and the downstream, draw the optimized route through the optimized POI coordinate points, and compare the routes and indicators before and after the optimization to show the effect of the optimized route.
- Design and build a traffic road network situation detection and analysis system to visually display road accidents in Beijing for a year,and display the ranking of accident impacts and detailed accident information. Website2

"Huawei Cup" Graduate Mathematical Modeling Contest | ***Team Leader*** **October 2021**

- The selected research question is the airline crew scheduling problem, and the combination and optimization of the airline staff scheduling to realize the efficient allocation of resources. A multi-objective optimization function is constructed by linear weighting method, a mixed integer programming model is constructed to accurately describe the problem
- By constructing a heuristic algorithm framework, an innovative idea of "unmarshalling and marshalling" based on taboo rules is proposed, which is highly adaptable and popular. Paper

Publications

Evaluating and Predicting road network resilience using traffic speed and log data | ***First Author***

The 22nd COTA International Conference of Transportation Professionals **(EI)**

Honors

- National College Student Mathematics Competition,**First Prize of Liaoning Province** 2018
- National College Students Mathematical Contest in Modeling,**Second Prize of Liaoning Province** 2018
- National College Student Mathematics Competition,**National Third Prize** 2018
- Innovation and Entrepreneurship Project honor,**National level** 2018

Skills

- Familiar with **various algorithms** of machine learning and **mathematical derivation** process,familiar with its related operations in **data mining and analysis**.
- Familiar with and master the **Pyhton** language and its related **data structure and algorithm** related fields. Familiar with deep learning frameworks such as **PyTorch**.
- Familiar with the **basic principles and design of database** and simple use of **SQL** language.