

# 梁锐 Raymond

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## 教育背景

2019.09-2021.02	哥伦比亚大学	统计 (数据分析方向)	纽约
● 主修课程: 线性回归, 时间序列分析, 机器学习, 金融建模等			
2014.09-2018.06	广东工业大学	电子商务	广州
● 主修课程: 数据库, 数据挖掘, 商业数据分析等			

## 专业技能

- 计算机技能: R(ggplot2, dplyr), Python (pandas, numpy, Matplotlib, sklearn), SQL, Tableau, MS (Excel/PowerPoint), Bloomberg Terminal;
- 数据分析: ETL, EDA, 数据可视化, 统计分析, A/B 测试;
- 数学建模: 回归模型、随机森林、KNN、LDA、SVM、PCA 和聚类等机器学习模型, 时间序列模型;
- 语言能力: 英语听说读写熟练, 托福 (102/120); 粤语流利。

## 实习经历

2020.05-至今	72 Dragons	数据分析实习生	纽约
——为地理教育行业从业者搭建数据库, 进行负责数据的 ETL, 搜集并处理 1016 条数据, 并对数据进行探索性分析			
● [数据搜集] 利用 Python 爬虫从 83 个大学网站获取地理教授个人信息, 搜集地理教授信息;			
● [数据转化] 对获得数据进行清理, 删除重复行和调整格式问题, 处理缺失值和极值;			
● [数据可视化] 运用 Tableau 对大学教授个人信息进行可视化, 提炼归纳并输出地理教授从业者报告。			
2019.01-2019.06	德国电信国际咨询公司	战略咨询实习生	广州
——负责商业分析, 协助 5 个项目并完成 4 份分析报告的撰写			
● [战略咨询] 为云南移动省公司提供数字化转型建议, 从用户画像、产业链、商业模式、竞争对手等角度拆分研究数字家庭行业运营逻辑;			
● [产品研究] 为移动杭州研发中心研究 5G 安全产品, 从 5G 新型应用场景、核心技术和网络结构三个方面对风险点、风险影响、风险解决方法进行盘点, 从而总结安全产品痛点, 提供价值¥20000+的产品报告。			
2017.01-2017.05	英诺天使基金	文创投资分析实习生	广州
——负责目标行业调研和目标公司的财务建模, 完成 4 份行业研究报告, 协助超过 10 家目标公司的估值研究			
● [行业研究] 从行业趋势、用户需求、市场竞争格局以及风险分析等角度深度参与行业研究, 识别成长计划, 分析领域包括动漫、知识共享、智能家居、汽车后市场等行业, 产出相应研究报告, 并提出投资建议, 报告获得公司导师的好评;			
● [财务建模] 协助参与超过 10 个创业公司团队的沟通评估工作, 输出访谈记录和目标公司估值。			

## 项目及比赛经历

2020.06-2020.07	百威亚太啤酒外卖餐饮平台发展策略研究 (百威校园挑战赛)	纽约
● [用户调研] 调查啤酒外卖订单渗透率低的原因, 通过问卷调查 (300 份问卷和 16 人深度访谈) 的方式总结出八大商业痛点;		
● [指标体系] 对门店数据和销售数据进行分析, 研究百威店铺率并构建出关键店铺筛选指标体系, 生成销量领先的店铺画像;		
● [商业策略] 结合市场分析、用户痛点和关键店铺画像, 提出打造品牌馆、跨平台引流、建立商家合作体系和培养消费者习惯的建议。		
2020.05-2020.06	基于 XGBoost 的沃尔玛销售数据预测 (个人 Kaggle 项目)	纽约
● [探索性分析] 对商店地点、价格与产品种类数据进行数据清理, 提出假设并用数据可视化验证假设;		
● [模型搭建] 使用 XGBoost 模型, 以 Tweedie 为损失函数建模预测, 并用 10 折交叉验证;		
● [模型检验] 使用 RMSSE 作为衡量指标, 误差值为 2.48。		
2020.04-2020.05	基于 Arima-Garch 模型的不同经济指标交易策略 (个人项目)	纽约
● [自相关分析] 通过绘制 ACF 和 PACF 图来确定合理的模型;		
● [数学建模] 构建时间序列模型 (ARMA-GARCH), 并使用 AIC 来确定参数;		
● [模型评价] 根据不同的经济指标 (标准普尔 500 指数、纳斯达克指数、原油和比特币) 创建时间序列模型并进行回测, 总结出该策略在市场波动比较大的时候表现会更好的结论。		

## 领导力与志愿经历

- [统计咨询] 作为哥伦比亚大学统计咨询师, 为从事统计分析的教师和学生提供研究、分析和解释统计数据的咨询建议;
- [社团管理] 广东工业大学玄武话剧社副社长, 任期内社团人数从 50 增加到 200+人。

## 自我评价

- 责任感强: 在社团活动和竞赛中团队成员中途放弃时, 主动承担领导者角色, 安抚其他成员情绪, 并坚持出色地完成任
- 执行力强: 坚持四年进行每日总结与计划, 高效专注并采取各种方法完成完成每日事项;
- 目标导向: 接到任务后明确目标, 并制定计划, 执行计划时, 时刻聚焦目标遇到问题及时解决。

# Rui (Raymond) Liang

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## EDUCATION

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**M.A. Statistics, Columbia University in the City of New York, New York, U.S.** 09/2019 - 12/2020

- Relevant Coursework: Linear Regression Model, Time Series Analysis, Statistical Machine Learning

**B.A. E-commerce, Guangdong University of Technology (GDUT), Guangzhou, China** 09/2014 - 06/2018

- Relevant Coursework: Business Data Analysis, Data Structure, Database, Programming (Java)
- Outstanding graduate thesis award

## SKILLS

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- **Programming:** R, SQL, MATLAB
- **Software:** Tableau, SPSS, Excel, PowerPoint
- **Data Analysis:** EDA, Data Visualization, Statistical Inference, A/B Testing, Time Series Models and Storytelling
- **Machine Learning:** Supervised Learning (regression, random forest, neural networks, KNN, LDA, SVM), Unsupervised Learning (PCA and clustering)

## PROFESSIONAL EXPERIENCE

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**Data Analyst Intern, 72 Dragons, New York, US**

- Designed and generated legible data structure with Python packages such as Pandas and Numpy which helped to process over 1500 missing values and integrated three data sources into one data frame
- Set up an added value model by using random forest with Python Scikit-learn to investigate the value added by different features such as directors, actors on the final box office which improve the efficiency of film makers to select suitable professionals
- Generated data visualizations by using Tableau, which largely shortened the time used by filmmakers to understand outcomes without digging into complex statistics or data science algorithms

**Consultant Intern, Detecon Consulting, Guangzhou, China** 01/2019 - 06/2019

- Collected the needed information through Deutsche Telekom database, open data and web scraping.
- Analyzed the industrial chain and business model in Smart Home industry to provide strategic suggestions.
- Identified the risk impacts and solutions from 5G new application scenarios, core technologies and network structure to write a ¥20000 worth 5G security product report for mobile Hangzhou R & D center.

**Operation Analyst Intern, Pearl River Investment Co., LTD, Guangzhou, China** 07/2018 - 10/2018

- Designed a model based on the inventories of past 50+ projects to predict the future revenue, leveraging the results through SQL and Tableau.
- Implemented quantitative models in Excel to estimate potential misstatement risk and investigated the reason.

**Business Analyst Intern, Inno Angel Fund, Guangzhou, China** 01/2017 - 05/2017

- Contacted 20+ industry executives to identify their business model and conducted business valuations to help the investment committee make decisions on ¥5M worth of investment deals.
- Contributed to an analytical report for the animation industry, IIP (Interactive Intelligent Panel) industry, and automotive aftermarkets.

## PROJECT EXPERIENCES

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**ARIMA-GARCH Trading Strategy on Different Economic Indicators, New York** 04/2020 - 05/2020

- Defined the types of lag by plotting ACF and PACF to fit reasonable models.
- Constructed the time series models (ARMA-GARCH) and used cross validation to tune the parameters.
- Created time series models on different economic indicators (S&P500, NASDAQ, crude oil and BitCoin)
- Diagnosed by simulation, cross validation and normality test.

**Prediction of Life Expectancy in Various Countries, New York** 11/2019 - 12/2019

- Examined the lack-of-fit, multicollinearity and diagnostics plots on the data from “The World Factbook” dataset.
- Remedied multicollinearity by ridge regression and LASSO, and non-constant variance by weighted linear regression.
- Implemented k-fold cross validation on model to validate each model.
- Chose best prediction model of total length of roadways by MSPR and MSE.

**Research on community e-commerce competition strategy based on factor analysis, Guangzhou** 01/2018 - 06/2018

- Conducted analysis on top-30 community e-commerce companies.
- Used PCA model to obtain a competitiveness evaluation model.
- Provided strategic suggestions for the studied e-commerce company.

## LEADERSHIP AND VOLUNTEER EXPERIENCES

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- Vice president of Xuanwu Drama Club at GDUT and was responsible for increasing membership from 50 to 200+.
- Leader of a team that conducted financial research on Vanke Co., Ltd. and won the first prize at CFA research Challenge.
- Teacher of Little Star Summer Project PBOX 2016 at AIESEC Indonesia.