

## Yu (Jessica) Wang

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### EDUCATION

#### Rutgers University, New Brunswick, New Jersey, U.S.A

Major: *Financial Statistics and Risk Management* Master of Science GPA: 3.95/4.0 2016

- Relevant courses: Regression Analysis, Methods of Statistical Inference, Multivariate Analysis, Time Series, Simulation Methods, Data Mining, Portfolio and Risk Management, JAVA Programming

#### Central University of Finance and Economics (CUFE), Beijing, China

Major: *Mathematical Economics and Mathematical Finance* Bachelor of Economics GPA: 3.56/4.0 2014

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### PROFESSIONAL EXPERIENCE

#### HSBC Bank (China) Company Limited, Guangzhou, Guangdong, China

Ast Analytics Audit Manager – Internal Audit, Global Regulatory Compliance & Data Analytics Team Sep 2019-Present  
China Branch Audit Analytics Tool (BAAT)

- BAAT dashboard covers audits of credit card, wholesale credit, wealth management, account, counter and payment to meet audit DA needs;
- Provide analysis summary in audit scoping and planning phase and export outputs for exceptions and sampling;
- Schedule monthly job including encrypt and decrypt, setting parameters to run programs automatically;
- Lead Ali Cloud Tool usage and analysis programs migration when datasets migrated from Teradata to Ali Cloud;
- Visualize business process flowcharts, data automation cross-function flowcharts and org charts (using Visio).

#### Wealth management, product sales and operations audit (HK, HASE, CN)

- Support auditors in test scenarios and data analysis covering: unit trust, structured products and insurance transactions, frequent trading, Risk Profiling Questionnaire(RPQ), Incentives, relationship managers' (RMs') KPI, customer complaint data, potential vulnerable customer(PVC) sales;
- Incentives analysis helps raise an issue of deficiencies in application of Global incentive framework(GIF);

#### Other support in audit projects

- Global RC Investigation whistleblowing audit – Celonis process mining dashboard;
- China Home Mortgage Loan audit QS dashboard;
- Regulatory Compliance Risk Assurance(RCRA) QS dashboard.

#### Strategic Research Insights, Princeton, New Jersey, U.S.A.

Full time, Analysis Manager - Data Analytics Team

Jul 2016-May 2019

#### Segmentation study

- The objective of the study is to use PCA and clustering method to divide physicians into different groups such as leader, progressive, traditionalist. This helps our client send sales representatives to targeted physicians.
- After the segmentation, we provided an algorithm to classify physicians into labeled classes that are created in the first phase. This method can be applied into physicians in the whole market. To put the algorithm into practice, I built user friendly Excel tool by using VBA and Form Controls.

#### Monthly tracker study

- For a specific market, we tracked physicians' prescribing behavior, current usage and future usage. Over the years, we gave pretty good predictions through the primary research. With the stability of the new drug's market share. The monthly tracker study becomes quarterly reports.
- Techniques include merging different waves data, cleaning data and weighting. I built regression analysis to explore the relationship between market shares and performance of medicines' attributes.

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### RESEARCH PROJECTS

#### *Study of Developing Application Scorecard based on Logistic Regression (Using Python)*

2021

- Developed a data-driven credit risk model to predict and assign credit scores to existing or potential borrowers.
- This includes preliminary data exploration (data cleaning, imbalanced datasets, splitting), Binning (WOE and IV calculation and number of bins decision), model training and scorecard development.

#### *Study of Data Mining Classification Methods in German Personal Credit Data (Using R)*

2015

- Used both linear and nonlinear data mining classification methods to classify whether a loan application should be approved or not.
- Models include logistic regression, ridge and lasso regression, decision tree, random forest, support vector machine; Compared with different models using weighted test error rate.

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### TECHNICAL AND OTHER SKILLS

**PROGRAMMING:** Java, R, Excel (VBA), Visio, SQL, SPSS, Python, SAS, Qlik Sense, Tableau, Celonis, Latent GOLD

**CERTIFICATIONS:** Passed CFA Level 3, Passed FRM Level 1, SAS Certified Base and Advanced Programmer for SAS 9

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## 教育背景

新泽西州立罗格斯大学，美国新泽西州

专业：金融统计与风险管理 理学硕士 GPA: 3.95/4.0 2016

• 相关课程：回归分析，统计推断，多变量分析，时间序列，模拟方法，投资组合和风险管理，数据挖掘

中央财经大学，中国北京

专业：数理经济与数理金融 经济学学士学位 GPA: 3.56/4.0 2014

## 工作经验

汇丰银行(中国)有限公司，中国广东省广州市

数据分析师，全球监管合规组/数据分析组 2019.09 - 现在

汇丰中国分支行审计分析报表(BAAT)

- BAAT 报表包括信用卡，工商企业批发信贷，柜台，账户和付款等审计项目需要用到的数据；
- 报表提供总体重要指标和分布，数据钻取和探索功能，导出抽样数据和异常记录；
- 设置定时调度任务（包括加解密，参数设置）使既有程序随数据更新每月自动生成分析结果；
- 中国数据由 Teradata 迁移到阿里云过程中，领导阿里云工具的使用和分析代码程序迁移；
- 绘制可视化商业程序流程图，自动运行数据分析流程图和组织架构图(使用 Visio)。

财富管理，产品销售和运营审计项目(香港，恒生，中国)

- 负责审计项目中数据分析部分：定位单位信托基金，结构化产品和保险数据，分析频繁交易，风险取向问卷(RPQ)，销售产品匹配性，客户投诉数据，潜在较易受伤的客户(PVC)。

其他支持审计项目

- 全球 RC 调查告密审计 - Celonis 流程挖掘报表；
- 中国房贷审计 Qlik Sense 报表；
- 第二道防线合规风险(RCRA)系统 Qlik Sense 报表。

Strategic Research Insights，美国新泽西州普林斯顿

数据分析经理，数据分析组 2016.07 - 2019.05

市场分割项目

- 项目目的：根据数据用主成分分析和聚类分析把医生分类成 leader, progressive, traditionalist, 客户根据分类结果更有针对性地派销售代表和医生交流，项目基于 150 个医生的一手数据和二手数据进行分析；
- 医生进行分组后，我们同时提供一套算法，算法根据市场 2 万个医生的数据和特点把他们分到已有的组里进行定位。在这一步中我用 VBA 把算法制作成可以直接点选出结果的工具。

每月追踪项目

- 对于同样一个市场，项目不断跟进医生现在开每种药的份额和他们将来要给的市场份额，提供随时间变化的历史数据和对未来的预测。项目初期是每月进行一次调研，目前份额稳定进展到按季度提供报告；
- 技能包括合并数据，清洗数据和加权重；做回归分析来探讨市场份额和药的特性的关系。

其他负责内容

- 更新每周数据报告来追踪关键指数如提交保险份，申请通过率，拒绝实例原因总结(使用 SAS)；
- 对于同一逻辑的相似分析通过写 Excel VBA 或 Macro 来提高效率；
- 给数据组和调研组新成员提供 Excel 和 SPSS 培训。

## 研究项目

逻辑回归模型在评分卡开发中的研究（使用 Python） 2021

- 使用个人信贷数据制作申请评分卡，包含数据预处理（缺失值，异常值，样本不均衡，分训练集和测试集），分箱（计算 WOE 和 IV，确定分箱个数），建模和模型验证，制作评分卡

数据挖掘分类方法在德国个人信用数据上的研究（使用 R） 2015

- 使用线性和非线性数据分类方法来区分贷款申请是否应该被批准；
- 分类方法包括 logistic regression, ridge and lasso regression, decision tree, random forest, support vector machine.

## 编程技能和认证

技能：Java, R, Excel(VBA), Visio, SQL, SPSS, Python, SAS, Qlik Sense, Tableau, Celonis, Latent GOLD

证书：通过 CFA 3 级，通过 FRM 1 级，通过证券市场基础知识，证券交易，证券投资基金  
通过 SAS 基础和高级程序员认证