潘姣

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基本信息

工作经验：5 年　　年龄：30 岁　　婚姻状态：未婚
户口：北京　　籍贯：湖南长沙　　政治面貌：共产党员

教育背景

2014.9-2017.3　　北京航空航天大学　　材料科学与工程　　硕士

- **主修课程：**平均分 90，数理统计、固体物理、高等高分子物理学、先进复合材料、功能复合材料
- **荣誉奖项：**学业奖学金一等奖、优秀毕业生
- **学术成果：**作为第一作者发表 SCI 论文 1 篇，影响因子 3.38

2010.9-2014.6　　北京航空航天大学　　材料科学与工程　　本科

- **主修课程：**平均分 86，C 语言程序设计、大学计算机基础、工科高等数学、线性代数、概率统计、经济管理、航空航天概论、机械设计、大学物理、材料物理性能、电化学、结构化学、工程力学
- **荣誉奖项：**学习优秀奖学金一等奖、优秀生
- **志愿经历：**北航红马甲志愿服务队成员（2010.9-2012.6）

职业技能

硬技能

- **领域：**数据分析、数据科学、材料科学
- **编程：**Python、MySQL、Matlab、C++、Git Bash
- **仪表板：**Tableau、Quicksight
- **Python 库：**pandas、numpy、matplotlib、seaborn、geopandas、statsmodels、sklearn、pyspark
- **机器学习：**线性回归、逻辑回归、弹性网络回归、k 近邻、决策树、随机森林、k 均值、主成分分析
- **深度学习：**熟悉 tensorflow、keras 框架
- **云计算：**掌握 AWS S3、Athena、RDS、Redshift、Glue、Kinesis、QuickSight、EMR、CLI、SDK
- **材料科学：**高分子复合材料、柔性复合材料、电磁功能材料、电磁仿真计算、结构建模

软技能

- **沟通协调：**英语 (商务会话水平)；曾成功组织 10 次以上内外部合作的跨职能任务
- **写作：**曾参加 10 次以上百万级和千万级项目投标和项目申报工作，成功率约 90%
- **汇报：**曾代表部门参加 2021 年度述职汇报，被投票评选为年度最佳优秀经理

职业证书

- **英语：**雅思 (7.5)、英语六级 (568)、Business English Communication Skills (University of Washington)
- **数据分析：**Amazon Web Services: Data Analytics (Linkedin)
- **数据科学：**Python for Data Science、AI & Development (IBM)、Tools for Data Science (IBM)、Data Science Methodology (IBM)
- **大数据：**Introduction to PySpark (DataCamp)
- **数据库：**MySQL Intermediate Certificate (HackerRank)
- **编程：**计算机二级 C 语言证书
- **项目管理：**项目管理专业人士 (PMP) 认证中，已于 2022.5 完成培训

项目经历

玻璃面板电弧问题数据分析解决方案 (2022.11)

- **理解业务问题：**采用 Python 分析制造业玻璃面板 FDC 系统制程数据，完成数据建模全流程操作
- **建模调参：**应用随机森林模型预测分类和识别关键影响因子，采用网格调参和交叉验证优化模型
- **模型评价：**绘制混淆矩阵和 ROC 曲线，准确率达到 0.875，AUC 达到 0.92
- **关键影响因子识别：**识别出多个关键影响因子，根据变量重要性完成可视化
- **方案汇报：**成功解决宽形数据变量多、记录少和多重共线性问题，提供数据分析方案和演示汇报

用户画像 (2022.7-2022.8)

- **标签体系：**采用 Python 构建用户活跃时间段、近 30 天和近 7 天购物次数等行为和偏好用户标签
- **用户分组：**根据标签体系和 RFM 模型实现用户分组，完成用户画像分析

用户聚类、关联推荐与销量预测 (2022.3-2022.6)

- **用户聚类：**采用 K-Means 和 RFM 模型实现用户聚类分析，通过 TSNE 完成用户聚类结果可视化
- **商品推荐：**采用 Apriori 算法进行关联规则分析，通过购物篮分析进行数据挖掘完成商品推荐
- **时序预测：**采用 Arima 模型进行时间序列分析，BIC 为 422，销量预测结果良好

手写数字识别 (2021.10-2022.6)

- **机器学习：**利用 Python 进行机器学习建模，采用 K 近邻、支持向量机和随机森林模型识别图像
- **分类评估：**提升手写数字分类准确率至 99%，Kaggle 平台 Digit Recognizer 项目中排名 Top 10%

电磁性能建模预测、可视化与数据分析 (2019.6-2021.9)

- **建模仿真：**采用 Matlab 进行数据建模预测，预测结果与商用软件差异小于 8%，仿真效率提升 50%
- **可视化：**采用 Matlab 和 Python 完成三维可视化，绘制散点图、直方图和箱型图，输出分析报告

工作经历

2017.9-2022.9 (5 年)　　北京星网宇达科技股份有限公司　　总体部-部门经理

—— 2021.6-2022.9 电子对抗事业部-总体部-部门经理

- **行业调研：**跟踪国内外研究进展，开展行业研究和竞品研究，输出可行性分析报告和研究报告
- **总体设计：**分析新产品需求，确定指标体系和总体方案，跨部门沟通技术开发接口，推动项目启动
- **项目投标：**负责项目投标和项目申报技术方案编制与修改，实现 3 次以上千万级项目成功中标
- **个人奖项：**最佳优秀经理 (5/20，2021 年度)

—— 2020.6-2021.6 电子对抗事业部-研发部-技术组长

- **体系搭建与指标量化：**搭建多维度测试、仿真与数据驱动的指标评价体系，从无到有实现指标量化
- **数据分析与仿真建模：**采用 Matlab 和 Python 进行数据分析和挖掘，利用云计算资源实现仿真计算
- **测试驱动开发：**协同研发部、生产部、项目部、质量部和外部测试单位，推动跨部门、跨学科的开发
- **指标增长：**实现指标数量级式增长，达到国内领先水平，通过大批量应用验证
- **个人奖项：**技术创新奖 (2/500，2020 年度)

—— 2017.9-2020.6 电子对抗事业部-研发部-材料工程师

- **产品改进：**搭建某军工产品材料体系，建设材料团队，推动新材料应用和国产化，实现产品升级换代
- **发明专利：**获得 1 项发明专利授权，1 项发明专利在审
- **个人奖项：**优秀员工 (1/10，2019 年度)

2017.5-2017.8 (4 个月)　　湖南博翔新材料有限公司　　研发部-研发工程师

- **研究：**完成某隐身材料的技术调研、设备调研和方案编写，团队合作完成样品交付任务
- **汇报：**组织技术分享活动，完成汇报展示和沟通交流

Jiao Pan

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Education

Beihang University (QS ranking: 443) Beijing, China

Master of Engineering in Material Science and Engineering Sep 2014 - Mar 2017

- **Average Score:** 90/100
- **Courses:** Mathematical Statistics, Solid Physics, Advanced Polymer Physics, Advanced Composites, Functional Composites
- **Honors:** Frist Prize of Academic Scholarship, Excellent Graduate
- **Academic achievement:** published a SCI paper as the first author, impact factor: 3.38

Beihang University (QS ranking: 443) Beijing, China

Bachelor of Engineering in Material Science and Engineering Sep 2010 - Jun 2014

- **Average Score:** 86/100
- **Courses:** C Programming, Computer Foundation, Advanced Mathematics, Linear Algebra, Probability and Statistics, Economic Management, Introduction to Aerospace, Machine Design, Physics Foundation, Materials Physical Properties, Engineering Mechanics
- **Honors:** First Prize Scholarship, Excellent Student
- **Volunteering:** Red Vest Volunteer Team member (Oct 2010 – Jun 2012)

Skills

Hard Skills

- **Areas:** Data Analytics, Data Science, Materials Science
- **Coding:** Python, MySQL, Matlab, C++, Git Bash
- **Dashboard:** Tableau, Quicksight
- **Python Libraries:** pandas, numpy, matplotlib, seaborn, geopandas, statsmodels, sklearn, pyspark
- **Machine learning:** Linear Regression, Logistic Regression, Elastic-net Regression, KNN, DT, RF, SVM, K-means, PCA
- **Deep learning:** familiar with tensorflow and keras frameworks
- **Cloud computing:** AWS Data Analytics: S3, Athena, RDS, Redshift, Glue, DynamoDB, Kinesis, QuickSight, EMR, CLI, Cloud9, SDK
- **Materials Science:** polymer composites, flexible composites, electromagnetic materials, electromagnetic computing, structure modeling

Soft Skills

- **Language:** English (Professional working proficiency), Mandarin (Native)
- **Creativity:** 3 years' experience working as a creative engineer, succeeded in solving multi-disciplinary problems in a cross-functional team, awarded the Technology Innovation Prize in the 2020 annual summary meeting
- **Leadership:** 2 years' experience working as a supportive technical team leader, successfully organized more than 10 collaborative tasks
- **Writing:** outlined and drafted technical documents to bid for projects with a success rate of about 90%
- **Reporting:** voted as the Excellent Deparment Manager in the 2021 annual report meeting

Certificates

- **English:** IELTS (7.5), CET6 (568), Business English Communication Skills (University of Washington)
- **Data Analytics:** Amazon Web Services: Data Analytics (Linkedin)
- **Data Science:** Python for Data Science, AI & Development (IBM), Tools for Data Science (IBM), Data Science Methodology (IBM)
- **Big Data:** Introduction to PySpark (DataCamp)
- **Database:** MySQL Intermediate Certificate (HackerRank)
- **Programming:** NCRE Grade 2 (C Programming)
- **Project Management Professional (PMP)**: Completed the training in May 2022

Projects

Data Analysis Solution to Glass Panel Arcing Issue (Nov 2022)

- **Business Understanding:** Analyzed glass panel FDC data with Python, conducted the data mining flow
- **Data Mining:** Predicted the arcing classification and identified key factors with Random Forest model
- **Model Tuning:** Optimized the model by Grid Search and Cross Validation
- **Model Evaluation:** Plotted the Confusion Matrix and ROC Curve, achieved the accuracy of 0.875 and AUC of 0.92
- **Key Factors Identification:** Identified key factors and completed visualization with variable importances
- **Demo Reporting:** Solved wide data and multicollinearity problems, provided data analysis solution and gave a presentation

E-commerce User Profile (Jul 2022 - Aug 2022)

- **Data Preprocessing:** Implemented data preprocessing for the e-commerce dataset with millions of online shopping records
- **Label System:** Built a label system to analyze customer behaviors, created user active periods and favorite commodity categories labels
- **Customer Clustering:** Applied the label system and RFM model to cluster customers

User Clustering, Product Recommendation and Sales Volume Prediction (Mar 2022 - Jun 2022)

- **Unsupervised Clustering:** Applied K-means and RFM model to cluster users and implemented data visualization with TSNE
- **Product Recommendation**: Analyzed association rules to recommend products with APRIORI by analyzing the shopping basket
- **Time Series Analysis:** Implemented time series prediction with ARIMA model and predicted sales volumes well with a BIC of 422

Digital Recognizer (Oct 2021 - Jun 2022)

- **Machine Learning:** Recognized hand-written digital numbers by building KNN, SVM and RF machine learning models
- **Classification Evaluation:** Achieved 99% accuracy for classification and ranked as top 10% on the Kaggle project

Electromagnetic Properties Prediction, Visualization and Data Analysis (Jun 2019 - Sep 2021)

- **Modeling Simulation:** Computed electromagnetic properties for multiple targets and realized 3D visualization with Matlab and Python
- **Computing Optimization:** Enhanced the computing efficiency by more than 50% compared with the commercial software

Work Experience

Beijing Starneto Technology Co., Ltd. **Sep 2017 - Sep 2022 ·5 yrs, Beijing, China**

- Department Manager, Overall Design Department, Jun 2021 - Sep 2022
  - **Industry Investigation:** Investigated industry trends, rival products and new products to provide feasibility and research reports
  - **Overall Design:** Summarized new product metrics, directed the overall design, promoted the launch of a new project
  - **Bid Writing:** Outlined and revised technical proposals to bid for projects, won more than 3 projects with each over ¥10 million
  - **Honor:** Excellent Deparment Manager (5/20)
- Team Leader, R&D Department, Jun 2020 - Jun 2021
  - **Metrics Quantitative Analysis:** Developed a comprehensive testing system to quantify key technical metrics from scratch
  - **Data Analysis and Modeling:** Applied Python, Matlab and cloud computing to perform modeling simulation and data analysis
  - **Test and Model Driven Development:** Solved multi-disciplinary technical problems in a cross-functional team driven by data
  - **Metrics Growth:** Optimized the key technical metrics by an order of magnitude and established the leading position in the market
  - **Honor:** Technology Innovation Prize (2/500)
- Materials Engineer, R&D Department, Sep 2017 - Jun 2020
  - **Product Upgrading:** Established a materials system and built a team of 3, upgraded the product and cut cost by more than 10%
  - **Business Writing:** Wrote technical proposals and collaborated with the team to pass the quality management certification
  - **Customer Communication:** Negotiated with customers and contributed to a project which was finally awarded a national 2nd prize
  - **Invention Patents:** Drafted 2 invention patents, 1 authorized and 1 under review
  - **Honor:** Excellent Employee (1/10)

Hunan Boxiang New Material Co., Ltd. **May 2017 - Aug 2017 ·4 mos, Changsha, China**

- R&D Engineer, R&D Department
  - **Research:** Implemented technical research, experiments and wrote proposals, collaborated on delivering new material samples
  - **Reporting:** Organized a sharing session and conducted a technical reporting