HOFFMANN ZHU

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EDUCATION

DUKE UNIVERSITY, **The Fuqua School of Business**   Durham, NC
*Master of Science in Quantitative Management***: Business Analytics – GPA 3.7**   *May 2024*
Merit Scholarship Recipient, Selected Admissions Ambassador
Data Science Coursework: Modern Analytics (Python, Pytorch), Data Science for Business (R), Data Infrastructure (SQL)
Domain Coursework: Digital Marketing, Customer Relationship Management, Pricing, Business Communications

FEI TIAN COLLEGE   Cuddebackville, NY
Bachelor of Music, major in Violin Performance – GPA 3.79   *May 2020*

WORK EXPERIENCE

DUKE UNIVERSITY CAPSTONE FOR LIGHTFORCE ORTHODONTICS   Durham, NC
Business Analyst   *Mar. 2024 – May 2024*

- **Customer Analysis:** Uncovered key insights that informed strategic decisions on orthodontist segments by cleaning and validating 97,000+ rows of customer account data using **SQL** and **Python**.
- **Model Building:** Utilized **Python** to build BG/NBD model to segment customers and pinpoint high value customers, decreasing marketing expenses by 8% and increasing marketing ROI
- **Performance Automation:** Enhanced business processes by automating performance reporting and metrics tracking using **Tableau** dashboards, improving decision-making efficiency by 10%
- **Stakeholder Management:** Streamlined communication with non-technical stakeholders by creating comprehensive documentation on data processes, including data cleaning procedures.

SHEN YUN PERFORMING ARTS INC.   Cuddebackville, NY
US based company with eight troupes touring worldwide   *June 2020 – May 2023*
Data Analyst

- **Market Research:** Conducted market research by analyzing audience feedback and demographic data using **Python**, cluster analysis and factor analysis to develop customized marketing strategies, boosting ticket sales by 10% in target segments.
- **Data Analysis:** Developed and managed **SQL** queries to extract, transform and analyze 20+ datasets of 800,000+ rows on performance metrics, operational data and financial records, reducing query times by 20%.
- **Report Automation:** Improved reporting accuracy and efficiency by automating Excel reports using advanced formulas and **Python**, reducing manual reporting time by 30% and ensuring data consistency across 800,000+ rows of performance and financial metrics.
- **Statistical Modeling**: Utilized **Python** to conduct regression analysis on performance data from 121 shows per year to identify factors impacting performance, increasing performance quality by 15%.
- **A/B Testing:** Created and executed comprehensive **A/B testing** strategy using **Python** to measure the impact of marketing initiatives on audience retention, increasing customer engagement by 5%.
- **Business Intelligence:** Leveraged **Power BI** to create 10+ interactive dashboards that visualized key metrics, leading to data-driven recommendations and a 20% increase in operational efficiency.

SELECTED PROJECTS

Customer Analysis: Analyzing Athena Softworks Customers and Gaming Market (Python)
- Analyzed and segmented the gaming market using advanced factor analysis, cluster analysis, and regression models in Python to identify an acquisition target with the highest ROI, resulting in an increase in market share
- Utilized regression models to recommend strategic decisions in game acquisitions, increasing customer engagement

Data Visualization: Healthcare Analytics (Tableau)
- Harnessed SQL and Tableau for data extraction, analysis and visualization, catalyzing a 10% increase in operational efficiencies
- Effectively communicated complex healthcare data to executives, highlighting actionable insights for strategic improvements

Database Query Optimization: Dognition User Web Behavior Analysis (SQL)
- Improved customer engagement through analysis of user behavior and recommendation of data-driven strategies
- Cleaned 8M row dataset on SQL relational database: removing erroneous data entries and built relational schema

TECHNICAL CAPABILITIES & CERTIFICATIONS

Tech Skills: **SQL**, **Python** (PyTorch, Pandas, Numpy, Sci-kit learn), **R**, **Tableau**, **PowerBI**, Google Analytics, NoSQL, Advanced Excel (VBA, Crystal Ball, Treeplan, PivotTable, Solver), A/B Testing, CRM, ETL, AI & LLM Algorithms, JIRA, Snowflake, Agile, Lean
Certifications: Google Data Analytics Certificate