Liuhui Zhao

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Summary

Data science professional with 8+ years of experience bridging advanced analytics with product strategy. Proficient in Python and SQL, with expertise in exploratory data analysis, predictive modeling, and data visualization. Strong background in collaborating with cross-functional teams to deliver actionable insights and drive business decisions. Passionate about customer engagement, knowledge sharing, and building scalable data science solutions.

Professional Experience

Data Analytics Lead | Daimler Truck North America *Jan 2024 – Present*

- *AI-Driven Product Innovation*: Developed an LLM agent that integrated internal databases with external knowledge sources to assist market planning specialists, enhancing product feature development.
- *Product Feature Enhancement*: Built descriptive and predictive models on truck market data, delivering insights that shaped marketing strategies and product adjustments.
- *User-Centric Prototyping*: Designed and deployed an interactive inventory dashboard using Snowflake Streamlit, facilitating real-time decision-making.
- *Actionable Insights*: Extracted key customer trends and patterns from historical sales data, driving product planning improvements.

Senior Transportation Analyst | New Jersey Institute of Technology *Dec 2020 – Jan 2024*

- *Data-Driven Decision Support:* Applied machine learning techniques to analyze roadway safety and optimize traffic management, integrating diverse datasets to support strategic planning.
- *Process Automation & Product Impact:* Automated ETL and data integration processes, enhancing data pipeline reliability and reducing processing time by 40%.
- *Insight Communication:* Delivered impactful data visualizations using ArcGIS Dashboard and Plotly Dash, translating technical findings into strategic recommendations for stakeholders.

Postdoctoral Researcher | University of Delaware *Jun 2017 – May 2019*

- *Optimization for Product Performance:* Developed and implemented optimization algorithms for autonomous vehicles, achieving significant gains in fuel efficiency (by 25%) and travel time (by 13%).
- *Cross-Platform Innovation:* Established a simulation test bed using APIs and COM interfaces to accelerate self-driving car development, integrating complex technical systems with practical applications.

Instructional Associate | Georgia Institute of Technology *Jan 2023 – Jan 2024*

- *Technical Training & Communication:* Supported graduate-level courses in data analytics and machine learning, communicating Python techniques and product-relevant technical concepts to a diverse audience.

Project Experience

Housing Market Analysis | Gatech *Python (Scikit-Learn, XGBoost, Dash, Pytorch, Keras), Heroku*

- Built an ensemble machine learning model for predicting housing prices, achieving a 29% improvement over baseline regression models.
- Developed an interactive web application using Plotly Dash to visualize housing market trends and predictions, garnering 85% user satisfaction for functionality and user experience.

Research Pattern Identification | Gatech *Python (BeautifulSoup, Gensim, NetworkX)*

- Scraped and cleansed domain-specific journal data for publication analysis.
- Applied topic modeling algorithms (LDA) to uncover key themes in emerging technologies.
- Conducted network analysis to identify collaboration patterns and influential researchers.

Skills

- Statistical Analysis
- Predictive Modeling
- Machine Learning
- Deep Learning
- Python | R | C#
- PostgreSQL | MySQL
- Hadoop | Spark
- AWS | Snowflake
- Streamlit | Dash
- Alteryx | Tableau | PowerBI
- Docker | Git
- Matlab | SPSS

Education

Ph.D. in Transportation | New Jersey Institute of Technology *Aug 2016*
M.S. in Analytics | Georgia Institute of Technology *Dec 2022*
M.S. in Geography | The University of Alabama *May 2011*