

# Arian Alai

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## Professional Summary

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Data science professional with 2 years of business intelligence experience and 2 years of mathematics & statistics tutoring experience. Passionate about leveraging data-driven insights to drive strategic decision-making and foster organizational growth. Proficient in Python, R, Excel, SQL, Tableau, and Grafana.

## Professional Experience

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### Graduate Teaching Assistant

University of Nebraska-Lincoln

August 2024 - Present

- Lead introductory statistics courses and lab sessions.
- Create supportive learning environments and deliver lessons.
- Provide timely, constructive feedback on assignments and exams.
- Foster statistical literacy and analytical thinking among students.

### Business Intelligence Analyst

Sandhills Global, Lincoln, Nebraska

August 2023 - August 2024

- Analyzed data from Sandhills products and services to enhance customer satisfaction.
- Streamlined internal processes through automation using SQL, R, and Python.
- Developed and maintained interactive dashboards using Tableau and Grafana.
- Ensured data accuracy and quality through rigorous quality assurance processes.

### Business Intelligence Intern

Sandhills Global, Lincoln, Nebraska

September 2022 - August 2023

- Reviewed and analyzed data from Sandhills products and services.
- Collaborated with Data Science team to apply insights to market challenges.
- Created internal reporting features to streamline information processing.
- Utilized Microsoft Excel, Azure, Jenkins, SQL, Tableau, R, and Python.

### Business Analyst Intern

Sandhills Global, Lincoln, Nebraska

August 2022 - September 2022

- Designed and developed processes for internal and external task order systems.
- Collaborated with Business Analysts and Software Developers on logical and analytical-based projects.

### Investor Services Intern

Charles Schwab, Omaha, Nebraska

June 2022 - August 2022

- Assisted clients with TD Ameritrade accounts.
- Collaborated with interns on business project.
- Prepared for Securities Industry Essentials (SIE) Exam to deepen finance knowledge.

### Peer Tutor

Doane University, Crete, Nebraska

August 2021 - May 2023

- Provided tutoring in mathematics, data analytics, and financial accounting courses.
- Customized teaching styles for 14 individual students and 3 test-prep classes.
- Assisted tutoring coordinator in improving Doane's tutoring system.

## Professional Projects

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### Sandhills Global (2022-Present)

### AI and Machine Learning Systems

#### AI Content Filtering Enhancement

Jul 2024 - Aug 2024

- Implemented granular content filtering based on publication and location.
- Developed scripts for tag data collection and integration with Redis and Qdrant databases.
- Enhanced AI system responsiveness and search accuracy.

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| <b>vLLM System Monitoring</b>  | May 2024 - Jun 2024 |
| <ul style="list-style-type: none"> <li>Designed Grafana dashboard for monitoring Virtual Large Language Model performance.</li> <li>Configured Prometheus to track key metrics including memory usage, CPU utilization, and request latency.</li> <li>Enabled real-time system performance monitoring and proactive resource management.</li> </ul>  |                     |
| <b>AI System API Integration</b>   | Mar 2024 - Apr 2024 |
| <ul style="list-style-type: none"> <li>Modernized chatbot infrastructure by replacing external API calls with internal integrations.</li> <li>Implemented three new endpoints for improved data access.</li> <li>Streamlined system architecture for enhanced maintainability.</li> </ul>  |                     |
| <b>Data Analytics and Visualization</b>  |                     |
| <b>Advanced Tableau Extensions Development</b>   | May 2023 - Aug 2024 |
| <ul style="list-style-type: none"> <li>Integrated R and Python capabilities with Tableau using Rserve and TabPy.</li> <li>Implemented advanced analytics including SARIMAX forecasting, DBSCAN clustering, and PCA.</li> <li>Enhanced data visualization capabilities beyond native Tableau features.</li> </ul>   |                     |
| <b>Market Data Integration</b>   | Feb 2024 - Mar 2024 |
| <ul style="list-style-type: none"> <li>Enhanced monthly market reports with retail sales and brand-specific pricing data.</li> <li>Created new dashboards for metric tracking and trend analysis.</li> <li>Improved stakeholder decision-making through comprehensive market insights.</li> </ul>  |                     |
| <b>Listings Analysis Dashboard</b>   | Aug 2023 - Oct 2023 |
| <ul style="list-style-type: none"> <li>Expanded Tableau report with new dashboard for tracking net listings.</li> <li>Implemented metrics for Added/Dropped Listings and Top Net Listings by category.</li> <li>Provided sales team with actionable inventory change insights.</li> </ul>  |                     |
| <b>Data Pipeline Automation</b>  | Jun 2023 - Dec 2023 |
| <ul style="list-style-type: none"> <li>Automated serial number data import process using R.</li> <li>Reduced processing time from several days to 15 minutes.</li> <li>Developed SQL queries and data condensation algorithms.</li> </ul>  |                     |
| <b>Infrastructure and Monitoring</b>   |                     |
| <b>Health Check Dashboard Implementation</b>   | Jan 2024            |
| <ul style="list-style-type: none"> <li>Developed Grafana dashboard for ML stack health monitoring.</li> <li>Implemented Prometheus metrics for service status tracking.</li> <li>Enabled rapid issue identification and system health assessment.</li> <li>Established Spark monitoring on Kubernetes cluster.</li> <li>Created Grafana dashboard for resource and job metrics.</li> <li>Improved visibility into Spark job performance and resource utilization.</li> </ul> |                     |
| <b>Data Collection and Analysis</b>  |                     |
| <b>Production Data Analytics</b>   | May 2023 - Sep 2023 |
| <ul style="list-style-type: none"> <li>Developed web scraper for production data collection.</li> <li>Implemented data validation and reporting systems.</li> <li>Streamlined data integration processes.</li> </ul>   |                     |
| <b>Tableau System Audit</b>  | Apr 2023 - Sep 2023 |
| <ul style="list-style-type: none"> <li>Conducted comprehensive audit of internal Tableau content.</li> <li>Created tracking system for workbook usage and user engagement.</li> <li>Developed dashboard for content management and archival decisions.</li> </ul>  |                     |
| <b>Stored Procedure Implementation</b>   | Nov 2022 - May 2023 |
| <ul style="list-style-type: none"> <li>Created logging system using R and SQL.</li> <li>Created Tableau dashboard to visualize category data.</li> <li>Authored related documentation for BI analysts and data scientists.</li> </ul>  |                     |
| <b>Market Data Automation</b>  | Oct 2022 - Jan 2023 |
| <ul style="list-style-type: none"> <li>Automated website data scraping and reporting processes.</li> <li>Developed Tableau dashboard for marketing team analysis.</li> <li>Identified potential customer leads through trend analysis.</li> </ul>  |                     |
| <b>Hurricane Ian Impact Analysis</b>   | Oct 2022 - Feb 2023 |

- Analyzed equipment inventory in hurricane-affected areas using USGS data.
- Created SQL queries for location-based analysis.
- Developed Tableau visualization for tracking assets affected by hurricane.

## Charles Schwab (2022)

### Business Analysis

#### COVID-19 Client Support Enhancement

Jul 2022

- Analyzed client needs during pandemic with intern team.
- Conducted research on financial service delivery improvements.
- Developed recommendations for enhanced client engagement.

## Doane University (2022)

### Academic Research

#### Student Debt Analysis Project

Sep 2022 - Dec 2022

- Conducted statistical analysis of Nebraska student debt using Department of Education data.
- Created linear models to analyze loan relationships.
- Developed predictive models for loan repayment rates.

## Education

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### Master's Degree

University of Nebraska-Lincoln

In Progress

### Bachelor's Degree

Doane University

Graduated May 2023

## Publications

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Colclasure, Blake, Alai, Arian, Quinn, Kristina, Granberry, Tyler, Doyle, Erin, & Durham Brooks, Tessa. (2024). *Voices from Graduate School and the Workforce: Identified Student Outcomes from Completing a Multi-Semester Undergraduate Research Experience Capstone*. *Education Sciences*, 14, 598. 10.3390/educsci14060598.

## Skills

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- Data Analysis and Visualization
- Statistical Analysis and Machine Learning
- Python, R, SQL, Tableau, Grafana
- Business Intelligence
- Problem Solving and Troubleshooting
- Communication and Teamwork
- Teaching and Mentoring

## Awards

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- Tutor of the Year, 2023 - Doane University