Alex Harrods (Tatyana Okoneshnikova)

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SUMMARY

I recently completed a certification in Data Analytics and have over 15 years of experience in project management, data collection, and analysis from designing educational programs. I'm skilled in Python, SQL, Tableau, and statistical analysis, and I enjoy unveiling the stories within data to help make good decisions. I'm excited to bring my analytical skills and leadership experience to a data-driven team, to contribute to meaningful projects and help organizations achieve their goals.

SKILLS

Programming: Python (Pandas, NumPy, Scikit-learn, SciPy), SQL (MySQL, PostgreSQL), Git
Data Visualization: Tableau, Apache Superset, Python (Matplotlib, Seaborn)
Design & Reporting: PowerPoint, Adobe InDesign

FEATURED PROJECTS (more details at alexharrods.github.io/portfolio/ and https://public.tableau.com/app/profile/alex.harrods/vizzes)

Worst-Performing NYC Subway Lines in 2023 Through Comprehensive EDA
(https://github.com/AlexHarrods/Worst-Performing-NYC-Subway-Lines-in-2023-Through-Comprehensive-EDA)

- Identified the five worst-performing subway lines in New York City for 2023 using data from the Metropolitan Transportation Authority (MTA).
- Conducted a thorough Exploratory Data Analysis (EDA) focusing on train delays, major incidents, and customer journey metrics to assess subway lines performance.
- Discovered patterns of delays and incidents, including the impact of major incidents on specific lines, and analyzed passenger journey completion times.
- Analyzed the most common causes of delays and incidents, as well as monthly trends, and identified the biggest issues.
- Provided actionable insights that could help stakeholders identify problem areas and decide where improvements are most needed.

Gender Pay Gap Analysis at The Ohio State University: A Statistical and Visualization Approach
(https://github.com/AlexHarrods/Ohio-State-University-Gender-Pay-Gap-2023-)

- Analyzed The Ohio State University 2023 Combined Earnings dataset, assessing regular pay, overtime, bonuses, gross pay, and other compensation for over 40,000 non-student employees.
- Used Pandas and NumPy for data manipulation, and Matplotlib and Seaborn for data visualization, including bar plots, count plots, box plots, and heatmaps.
- Conducted statistical tests (Chi-Square Test and Mann-Whitney) to evaluate gender pay disparities, revealing significant differences across all pay categories.
- Discovered gender disparities in gross pay, bonuses, overtime, and other compensation categories, highlighting underrepresentation of females in higher pay brackets.
- Identified structural inequalities in overtime pay distribution and flagged negative pay values for further investigation.

Ohio State University Earnings 2023: EDA and Models
(https://github.com/AlexHarrods/Ohio-State-University-2023-Earnings---EDA-and-Models)

- Performed comprehensive exploratory data analysis on The Ohio State University 2023 Combined Earnings dataset using Pandas, NumPy, Matplotlib, Seaborn, Plotly, and Scikit-learn to assess earnings distribution, gender representation, and position group-based disparities.
- Implemented techniques like the Isolation Forest to detect and analyze outliers.
- Trained and evaluated regression models, including RANSAC Boosting, Huber Regression, Random Forest, Decision Tree, and Linear Regression to handle extreme values effectively.

New York Subway Ridership Visualization
(https://public.tableau.com/app/profile/alex.harrods/viz/NYCMTASubwayRidership/Dashboard1)

- Created a set of Tableau dashboards to analyze over 1 billion subway rides, aimed at understanding ridership patterns across New York.
- Visualized data on ridership by time, borough, and payment method, providing insights for transit planning and dynamics.

EXPERIENCE

Easy School Irkutsk, Russia
Instructional Designer Nov. 2009 – Mar. 2022

- Created 5 comprehensive English language courses (A1-C1) that are taught to over 2,000 students annually.
- Developed 12 English textbooks and 4 workbooks for adult learners, using learner-centered instructional strategies.
- Led a team of 5, working together to create effective teaching materials.
- Adapted educational programs for online formats using the latest visualization and multimedia tools.
- My efforts in designing courses and textbooks led to a 15% improvement in students' academic performance and a 20% increase in retention rates. This also contributed to a measurable increase in revenue.

EDUCATION

Irkutsk State Linguistic University Irkutsk, Russia
English philology