Jianbo Zhao
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HIGHLIGHT

Data science and analytics practitioner with cross-industry experience in machine learning, business intelligence, recommendation systems, geospatial analytics, and predictive modeling. Proven ability to translate complex datasets into actionable insights across sectors including e-commerce, fintech, manufacturing, urban planning, and mental health. Adept at collaborating with cross-functional teams and delivering solutions that improve efficiency, engagement, and revenue.

TECHNICAL SKILLS

- Libraries/Tools: Scikit-Learn, TensorFlow, Pandas, Seaborn, SQLAlchemy, Airflow, Power BI, Tableau, Flask, React, Docker, AWS, PostgreSQL, Google Advanced Data Analytics.
- Skills: Recommendation systems, predictive modeling, fraud detection, geospatial route-planning, A/B testing, KPI dashboard design, automated ETL pipelines, statistical analysis, feature engineering, BI reporting.

EDUCATION

University of Waterloo **Waterloo, ON**
Bachelor of Mathematics (Honours) Sep 2020 - Apr 2025
Relevant Coursework: Statistical Learning, Forecasting, Visualization, Linear Models, SQL & Databases, Simulation

PROFESSIONAL EXPERIENCE

Alphabet **Kitchener, ON**
Data Analyst Intern May 2024 – Aug 2024

- Optimized pricing strategy and feature design for a new email-marketing platform by benchmarking the pricing and capabilities of Klaviyo, Omnisend, and Mailchimp; insights led to a freemium tier and enhanced feature set that increased clients' click-through rates by 15 % and lifted their sales by 8 % across a 30-merchant pilot.
- Built a hybrid recommendation engine for an anime-streaming partner, tailoring content to distinct age cohorts and cross-platform audiences; combined collaborative filtering with demographic and behavioral signals and trained a matrix factorization model with a gradient-boosting ranker. A/B tests across 50 000 users reduced mid-season drop-off by 20 % and increased discovery of niche titles by 25 %, boosting adoption and view time among older and younger viewers alike.
- Achieved a 30 % adoption rate in the pilot launch of a geospatial route-finding app for walkers and cyclists; used Ripley's K-function and crowd-sourced safety ratings to balance path length, wait time and comfort, and designed an A/B test plan to measure travel-time savings and user satisfaction.

Volkswagen FAW Engine (Dalian) Co.,Ltd **Dalian, China**
Industrial IoT & Data Science Intern May 2022 – Aug 2022

- Reduced estimated tooling costs by 10% and minimized unplanned downtime by building a tool-life forecasting model that ingested multi-sensor data and generated early warnings for optimal replacement scheduling.
- Implemented and tuned a Random Forest regression model, validated via 10-fold cross-validation and grid search, achieving an R^2 of ~0.99 and mean absolute error under 10 units, enabling confident forecasts of remaining tool life.
- Designed and deployed an interactive dashboard and alert system, to visualize predicted vs. actual tool wear in real time. Enable end-of-life alerts, which automatically notified maintenance planners via email when tools neared replacement. allowing the manufacturing team to schedule tool changes proactively and avoid costly breakdowns.

Ping An Bank **Shenzhen, China**
Fraud-Risk Analyst Intern May 2021 – Aug 2021

- Prevented $2 000 in daily revenue losses by eliminating false-positive credit card alerts through deep analysis of user spending patterns; saved 100 cards from being wrongly blocked and recaptured 500 legitimate transactions each day.
- Applied a neural network classifier to segment 100 k+ fraud events, uncovering three main clusters responsible for 40 %+ of false positives; partnered with model engineers to refine detection logic and cut the FP rate by 15 %.
- Conducted qualitative interviews with affected customers to validate transaction scenarios, blending human insight with data analytics, improved model precision with customer-centric feedback loop and restored trust.
- Standardized the process into a Power BI dashboard adopted by 20+ analysts, integrating KPI tracking, segmentation analysis and early-warning triggers, earning formal recognition from management.

PROJECT EXPERIENCE

K-pop Trading Card E-Commerce Platform May 2023 – Aug 2023

- Built a full-stack e-commerce website with custom back end and front-end, enabling users to browse, list, and purchase cards while tracking sales and inventory trends.S
- Developed SQL/Python pipelines and analytics features to clean transaction data, forecast demand, and trigger restock alerts, helping the shop owner manage inventory more efficiently and integrated a simple rule-based recommendation engine based on clicks and purchases, improving product discoverability by ~20% and boosting engagement on the platform.