Yunmei Zheng

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EDUCATION

University at Buffalo | Bachelor of Science in Engineering Science — Sep 2019 - May 2023

- Courses: Applied Probability and Statistics, Introduction To Data Science, Statistics for Engineers, Engineering Computations, Analytics and Computing, Machine Learning and Society

SKILLS

Languages: R| MATLAB| Python | SQL| HTML|CSS| C/C++| JavaScript
Libraries: ggplot2| Pandas| NumPy| Matplotlib| NLTK| Seaborn
Software: VS Code | Google Colab | Tableau

CERTIFICATION

Google Data Analytics (in progress) — Google, Expected 2023
Oracle Cloud Data Management Foundations Associate — Oracle, 2023

EXPERIENCE

Electrical Engineering Intern — Manhattan, NY
Syska Hennessy Group — June - August 2022

- Collaborated closely with interdisciplinary engineering teams and external contractors across 5 projects to ensure on-time project delivery
- Drafted electrical schematics and single-line diagrams with AutoCAD to optimize power distribution for a high-rise banking headquarters
- Managed data entry for lights and wires using Excel and AutoCAD, ensuring **accurate and organized documentation**
- Performed detailed analytics on airport design data, transforming complex technical details into intuitive Excel charts and PowerPoint visualizations for presentation

PROJECTS

Impact of Atomic Bombings on Cancer Incidence | R — April - May 2023

- Cleaned and preprocessed large medical dataset with 40 years of cancer diagnosis records
- Constructed logistic regression model to identify correlation between radiation exposure levels and cancer risk
- Fine-tuned model hyperparameters and feature selection to boost predictive **accuracy to 85%** on test data

Flow Layout | Excel, Python — March - May 2023

- Employed Direct Clustering Algorithm and CRAFT to strategically **optimize 11 different department**
- Created a Mixed Integer Programming model to minimize transportation costs and enhance workflow
- Implemented optimized department configuration, reducing **production costs by 3%** and maximizing workflow efficiency

Bias in Police Force | Python — January - May 2023

- Performed NLP on police body camera transcripts to extract insights on potential misconduct indicators
- Designed and implemented predictive classification model to identify high-risk officers
- Recommended departmental policy changes based on analysis to improve accountability

Quantum Computing, Concord Consortium | HTML, CSS, JS, Python — Nov 2022 - May 2023

- Built educational game using quantum computing concepts to introduce students to the field
- Created interactive visualizations and simulations to demonstrate key quantum principles
- Refined game performance through user testing feedback and code enhancements

Machine Learning for River Forecasting, US Army | Python, R — Oct 2022 - Jan 2023

- Engineered features from historical river data, precipitation readings and weather forecasts
- Developed regression model to predict river flow levels at multiple points along river
- Boosted model **accuracy by 15%** via regression techniques and hyperparameter tuning

Demographics and Air Quality in NYC | R, RShiny — August - Dec 2022

- Formulated regression and clustering models predicting pollution levels across NYC neighborhoods
- Designed interactive charts and graphs using ggplot2 to allow intuitive exploration of pollution metrics across NYC neighborhoods with RShiny. Focused visualizations on most salient trends and patterns in the data.
- Improved model hyperparameters to increase **prediction accuracy to 70%**