Ericka Howard

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SUMMARY

Data Scientist with 5 years of experience leveraging machine learning in the business setting and a master's in statistics, currently building data science solutions to optimize the sales funnel in the insurance industry.

WORK EXPERIENCE

Data Scientist | *02/2023 – current* | *AmTrust Financial*
- Spearheaded new Business Owners Policy predictive model, achieving 27% increase in customer acquisition, YOY.
- Led full model development life-cycle, including EDA and R&D, building data pipeline and web app hosting model predictions for IT ingestion, CI/CD in production, and monitoring. SQL, Python, XGBoost, Flask, HTML.
- Established experimental framework for model selection, communicated results to product owners, actuaries, engineers, and leadership leveraging SHAP, feature importance metrics, and data visualization.
- Combined multiple data sources using: structured and unstructured data, 3rd party data, feature engineering, dimensionality reduction via NLP, text embedding, and named entity recognition.

Data Scientist | *04/2022 – 02/2023* | *The Hartford Insurance Group*
- Directed novel anomaly detection unsupervised machine learning model focused on optimizing customer experience, mentored a junior data scientist in the process.
- Played a pivotal role in implementation of a profitability model that delivered real-time removal of high loss customers, by driving data analyses, presenting results to leadership, and designing automated reporting, facilitating actionable decision making.

Associate Data Scientist | *05/2021 – 03/2022* | *The Hartford Insurance Group*
- Headed outbound sales machine learning model, supported business partners through A/B testing, data visualization, and in-depth statistical analyses.
- Supported lead segmentation predictive ranking model that directs incoming high conversion potential customers to best fit sales agents, which drove sustained improvements in sales performance.

Research Assistant | *06/2020 – 12/2020 (contract)* | *Cooperative Institute for Marine Resource Studies*
- Co-authored a peer-reviewed scientific publication based on statistical analysis and data visualization of spatial data.
- Implemented a clustering algorithm to solve a complex data grouping problem.

Statistics Graduate Teaching Assistant | *09/2019-03/2022* | *Oregon State University*
- Funded masters student teaching undergraduate statistics course work including study design, probability distributions, hypothesis testing, confidence intervals, linear regression, correlation, and logistic regression.

Technician, Geospatial Data | *03/2019 – 09/2019* | *Quantum Spatial Inc.*
- Designed training materials and led interns and technicians in data analysis techniques, in addition to duties below.

Technician Intern, Geospatial Data | *10/2018 – 03/2019* | *Quantum Spatial Inc.*
- Assisted with machine learning modeling & predictive analytics of large spatial datasets, analyzing aerial imagery for clients, using R, Python, Excel, Shiny dashboards, and GIS.

EDUCATION

M.S. Statistics	Oregon State University	03/2021
B.S. Math/Biology	Western Washington University	06/2015

SELECTED PROJECTS

Machine Learning Classification Using Satellite Imagery | 12/2020 – 03/2021
- Built simulations by training many random forests, compared accuracy with different hyperparameters.

Bootstrapping Parallelization Experiment | 10/2020 – 12/2020
- Tested use of socket method for parallel processing workflow to efficiently manage bootstrap simulations.

Interactive Web-Based Tool for Communication of Large Ensemble Models | 01/2020 – 07/2020
- Honorable Mention (2nd place) nationwide from the American Statistical Association.
- Designed dashboard and visualizations to analyze high volume datasets and communicate ensemble models.