

Geoff Perrin

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WORK EXPERIENCE

City of Guadalajara (Contract) • 06/2024 - Present

New York, NY / Guadalajara, MX

Senior Data Scientist

- Leading a data-driven audit and improvement of Guadalajara's transparency portal to assess open-data quality, legal compliance, and anti-corruption impact, with the goal to increase citizen trust and engagement by Fall 2026
- Identified systemic gaps in municipal transparency datasets and delivered actionable recommendations to strengthen data integrity and public accountability

City of Detroit (Contract) • 08/2017 - Present

New York, NY / Detroit, MI

Senior Data Scientist

- Built an ML model predicting occupancy for the City of Detroit which allowed the city to focus efforts on mitigating the foreclosure crisis and the 100k parcels under city control - model and program were valued at over \$8.5M in public benefits and heavily championed by Mayor Mike Duggan
- Created and led GIS mapping project for the Department of Neighborhoods Block Club program - project helped facilitate outreach and better target allocation of \$2M in public benefits for block clubs and neighborhood improvement projects
- Led geospatial analysis for the Mayor's Office in support of citizen engagement efforts for Covid vaccination participation, voter participation, and census participation - analysis and occupancy model were heavily used in the 2022 federal lawsuit challenging the 2021 US Census population estimate for the city

Nelo • 07/2024 - 10/2025

New York, NY / CDMX, MX

Senior Data Scientist

- Built production fintech underwriting / fraud ML models - working extensively in Spanish, created features from LLMs, transformers, geospatial data, demographic data, production app data, and 3rd party sources - models developed mitigated \$1M+ annually in losses
- Improved model latency by 90% through optimizing feature set and reducing model complexity, reducing overfitting, improving accuracy, and allowing an expansion of model use cases, leading to an additional \$250k annual mitigation of customer losses
- Extensive A/B experimentation design and analysis in order to develop and improve product features
- Leveraged advanced causal inference and uplift modeling techniques to identify high-impact drivers of underwriting quality, repayment behavior, and portfolio profitability

Urbint • 05/2021 - 07/2024

New York, NY

Senior Data Scientist

- Built the main GIS risk model measuring the impact of damages of underground utility assets - model became a centerpiece product for the business
- Met with utility clients 'in the field' to both provide insights internally and back to the clients, as well as continuing to build ML models and perform R&D for model improvements - helped secure \$5M in ARR in renewals
- Built out POC ML models for one of the continent's largest energy companies to secure \$1M ARR deal
- Designed and implemented a spatial analysis combining GIS data, and predictive modeling to assess infrastructure risk across a utility's high-voltage network
- Developed ETL pipelines and performed MLOps work to ensure up-to-date, high quality data that makes both the model builds and analysis quick to produce and implement, reducing the end to end time up to 90%
- Presented at GESC Conference on ML work to showcase Urbint and the data team as thought leaders in the industry

Machine Learning Engineer

- Writing production code / building ML models with a focus on energy utilities and their gas assets - extremely collaborative (agile) process, saving lives and utility companies millions of dollars due to significant reduction in number of incidents / gas explosions

Ford Motor Company • 04/2018 - 03/2020

Detroit, MI

Data Scientist

- AV / Smart Cities research - Provided data science expertise to support Ford Smart Mobility products and programs, such as an

accessibility tool to support AV initiatives, as well as year long engagements with depts. of transport in Mexico City, Miami, Pittsburgh, and Detroit.

NYU Center for Urban Science & Progress • 11/2016 - 07/2017

New York, NY

Graduate Research Assistant

- Improved the granularity of predicting household waste generation for the Department of Sanitation New York (DSNY) by building a neural network model with an R-squared nearing 0.87.
- Improved NYPD's ability to predict the propensity for a neighborhood to report a shooting incident by building a random forest classification model.

EDUCATION

New York University

M.S. in Data Science / Urban Informatics

University of Michigan

B.S. in Economics, Mathematics, German

TECHNICAL SKILLS

- Languages: Python, SQL, English, Spanish
- Tools: AWS, GCS, Airflow, Git, QGIS, ArcGIS
- ML: scikit-learn, XGBoost, Keras, transformers, geopandas
- Specialties: Causal inference, experiment design, geospatial analysis

PERSONAL PROJECTS

Masters Capstone:

Measuring Infrastructure Quality

in NYC Through Remote Sensing • 04/2017 - 07/2017

New York, NY

- Collected infrastructure data through images and accelerometer data captured through cell phones - processed and analyzed the data using a combination of machine learning techniques and classic computer vision algorithms
- I was the 'Pitchman' at NYU's 'Pitch Day', presenting our work to a panel of judges that included faculty and local tech leaders - we won third place in the competition

HOBBIES AND ACTIVITIES

Riseboro Spanish-Speaking "Friendly Visitor" Volunteer • 09/2021 - Present

New York, NY

- I make weekly visits & phone-calls to two older Brooklyn residents - we play harmonica, talk baseball, trade jokes, and I try to win at dominos