

Ayse Demir Davidson

AI & ML Products, Staff Data Scientist

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Causal Inference & Experimentation | Visualization | ML Product Development | LLM Explainability & Telemetry

Stack: Python, SQL, PySpark, Databricks, SageMaker, AWS AI Services, Azure, HTML & CSS

Tools: Dash/Plotly, ML Explainability (SHAP/LIME), Tableau

EXPERIENCE

Freelance; Remote

Sep 2024 - Present

- Advising growth-stage clients on applied data science and GenAI. Delivering end-to-end predictive data products, LLM explainability and evaluation dashboards driving revenue and operational efficiency.

* *NDA-bound work; technical artifacts available on request.*

AMAZON WEB SERVICES INC., Sr Lead (L6), Sales Data Science & Analytics; San Francisco, CA

Jun 2022 - Jul 2024

- Drove development of key strategic data & ML products for account acceleration, revenue-bridge modeling, and industry insight platforms for sales operations teams. Designed, shipped and productionized prioritization metrics, models, systems and improved forecast accuracy and targeting at scale.
- Served as an enablement multiplier; mentored and led teams and built internal training on data & model-driven visualizations, infrastructure and system design.
- Architected a multi-model decomposition model that broke down a \$80B revenue surface into granular drivers using diverse, complex modeling techniques. Partnered with the Finance team on LLM-driven dynamic revenue-bridge deep dives and executive readouts, enabling Global Sales leadership (including Matt Garman and senior executives) to ask natural-language questions and get verifiable, source-backed answers for planning.
- Led a pilot of Databook telemetry with the productivity team, testing adoption and value. Designed the productivity model using quasi-experimental techniques and recommended against scaling the tool further, saving \$10M.

GAP INC., Sr Data Scientist, Customer Decision Science; San Francisco, CA

Jan 2018 - May 2022

- Built causal inference and predictive analytics supporting planning; automated experimentation, propensity/ranking, time-series forecasting, attrition modeling, anomaly detection pipelines.
- Developed ML-backed dashboard initiatives for brand strategy teams, deploying data visualization applications that integrated data science models and APIs directly into real-time workflows to accelerate the speed of insights.
- Led and scaled a geospatial analytics platform (CARTO) end-to-end, from vendor sourcing through deployment - enabling ML-driven store closure/opening decisions across real estate teams.

OLD NAVY E-COMMERCE, Associate Data Scientist; San Francisco, CA

May 2016 - Jan 2018

- Led A/B test, personalization, experience, and content analytics of Old Navy online, designed causal experiments; created inference frameworks, produced strategic reports for senior executives. Drove million-dollar (~\$90M) test initiatives including New Arrivals linking, top navigation redesign, and mobile app projects directly influencing site.

NETPOLARITY, Trainee Data Analyst; San Jose, CA — Sep 2015 - Apr 2016

BBDO WORLDWIDE, Marketing Data Intern; Istanbul, Turkey — Jun - Aug 2014

MICROSOFT INC., Campus Brand Ambassador; Ankara, Turkey — May 2012 - May 2013

SELECTED LECTURES & TEACHING

Course Designer & Instructor, AI & Creativity, DDI Akademi; Istanbul, Turkey — Mar - Apr 2024

Instructor, Creative Code Intensive, Gray Area Foundation for the Arts; San Francisco, CA — Oct 2020 - Dec 2023

Dreamforce Speaker, Visualizing Climate Data; Salesforce Inc.; San Francisco, CA — Sep 2022

Google Art Week Speaker, Non-linear Storytelling, Alphabet Inc.; San Francisco, CA — May 2021

Course Designer & Instructor, Data Visualization (Python & Design), Gray Area Festival; NTU Analytics Lab — 2020

SPECIALIZED TRAINING

- Stanford University Online, Human-Centered Generative AI — Nov 2025
- Hugging Face - LLMs & Eval Course — Summer 2025
- Philosophy Seminar - Instructor: Dr. Ömer Aygün, Groningen University — weekly, Feb 2024 - Sep 2025
- Amazon ML University, Internal Modules — Jun 2022 - Mar 2024
 - Responsible AI - Bias Mitigation & Fairness Criteria
 - Explainable ML and Algorithmic Fairness
- Stanford University Online, Machine Learning — 2021
- Gray Area Foundation for the Arts, Studio Art Course in Computer Science — 2019

EDUCATION

International Technological University, San Jose, CA — MS in Computational Design, 2017

Binghamton University, New York, NY - BS in Managerial Information Systems, 2015 (Dual Diploma Program)

Middle East Technical University, Ankara, Turkey - BS in Business Administration, 2015 (Dual Diploma Program)