

DANIELLE HEYMANN

Principal Solutions Architect

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PROFESSIONAL SUMMARY

Technical leader and principal solutions architect specializing in AI/ML infrastructure, cloud architecture, and advanced analytics for complex research environments. Proven track record architecting custom software, AI/ML models, and data systems that drive strategic decision-making at federal agencies and Fortune 500 clients

EDUCATION

M.S. Computer Science, Computational Operations Research Williamsburg, VA
The College of William and Mary 2019 - 2021

B.S. Industrial and Systems Engineering Bethlehem, PA
Lehigh University 2012 - 2016

- Magna Cum Laude

Graduate Certificate: Data Analytics Boston, MA
Northeastern University 2019

EXPERIENCE

Principal Solutions Architect Remote, MD
[Code for America](#) 2025 - Present

- Leads technical strategy and solution design in collaboration with cross-functional teams and partners to improve access to critical social services
- Assesses technical infrastructure, builds rapport with public sector stakeholders, and delivers scalable, open-source solutions

Founder Remote, MD
[Heymann Apps LLC](#) 2025 - Present

- Founded solo technology company developing custom software and AI-powered tools with arts, movement, and community impact, including graph-based optimization systems, neural search applications, and intelligent route planning with spatial analysis.
- Built Data Pointes Lab with FastAPI/Flask hybrid architecture, network analysis algorithms, ethical AI content moderation, and privacy-first design serving global ballet community with 375+ curated models
- Developed custom applications leveraging LLMs, neural search, computer vision, genetic algorithms, and real-time data processing, with expertise spanning garden optimization, volunteer discovery, and movement-aware systems.

Lead Data Scientist, AI/ML & Automation Bethesda, MD
[National Institute of Child Health and Human Development \(NICHD\), Referral and Program Analysis Branch \(RPAB\)](#) 2024 - 2025

- Architected and deployed two successful AI system pilots using neural networks and advanced classification models for automated grant referral and study section assignment
- Established AI/ML/NLP infrastructure for scientific research categorization and application referral via MLOPs and Microsoft Azure
- Built scalable cloud architecture on Microsoft Azure, implementing foundational MLOps practices
- Developed end-to-end data engineering pipeline integrating NICHD database systems
- Established NICHD RPAB's GitHub organization and create structured repositories implementing secure configuration management
- Led development of advanced clustering algorithms and topic modeling techniques to identify emerging scientific trends and inform strategic research priorities
- Provided technical leadership across NICHD executive leadership and NIH entities and mentorship to junior/senior data scientists
- Presented AI/ML innovations at NIH AI Symposium and national conferences
- Established enterprise-level GitHub organization with structured repositories and secure configuration management

Associate Manager & Senior Data Scientist Washington, DC
[Accenture Federal Services](#) 2021 - 2023

- Led and supported advanced analytics and data science projects at the Applied Intelligence Discovery Lab and Applied Research Group for client engagements and account support
- Developed one of AFS's first Generative AI applications for multistakeholder, multifaceted decision making with Large Language Models (LLMs); given strong interest in the application, led multidisciplinary team to enhance and deploy it at various federal clients
- Directed Discovery Lab Mission Accelerator program, leading multidisciplinary team of 10 specialists across web development, data science, and engineering workstreams
- Architected and delivered 30+ federal agency projects implementing advanced analytics and machine learning solutions
- Established and led technical communities of practice in graph theory, computer vision, and women in data science
- Authored technical whitepapers resulting in funded projects, focusing on emerging AI technologies and advanced analytics
- Architected enterprise Git strategy and cloud infrastructure, establishing centralized repositories and CI/CD pipelines that accelerated innovation across multiple federal projects
- Led technical presentations on generative AI, computer vision algorithms, and network optimization techniques
- Contributed to 4 whitepapers, resulting in additional funded projects

Software Engineering Analyst Washington, DC
[Accenture Federal Services](#) 2020

- Developed automated ETL pipeline to process and integrate large-scale network data for hierarchical mixed effects modeling
- Implemented advanced predictive modeling and stochastic simulation methods for COVID-19 analysis
- Engineered robust data processing solutions for complex statistical analysis workflows

EXPERIENCE

Systems Engineer

[Lockheed Martin Space Systems Company](#)

Herndon, VA

2016 - 2018

- Operated and supported satellite constellation systems in real-time, dynamic environment
- Led technical training development and earned team lead certification
- Managed critical mission operations requiring rapid decision-making and advanced troubleshooting in high-stakes environment

Summer STEM Camp Instructor

[Launch Math & Science Centers](#)

New York, NY

2016

Electrical Engineering Intern

[WSP Group](#)

New York, NY

2014 - 2015

SKILLS

Programming Languages: Python, R, SQL, Java, MATLAB, AMPL, LaTeX, JavaScript, HTML

AI and Machine Learning:

Natural Language Processing, Neural Networks, Deep Learning, Classification Models, Clustering Algorithms, Network Analysis, TensorFlow, PyTorch, LangChain, BERT, OpenAI, HuggingFace, OpenCV, Scikitlearn, Ray, Sentence-Transformers, NLTK

Cloud & Infrastructure: Azure Cloud Services, AWS, MLOps, Systems Engineering, Git, GitHub Enterprise, Azure DevOps

Data Science & Analytics:

NumPy, SciPy, Pandas, RStats, Statsmodels, Graph Analytics, NetworkX, igraph, Time Series Analysis, Streamlit, FastAPI, RShiny, Plotly, Seaborn, Gurobi, OR-Tools, CPLEX, Mapbox, ArcGIS, tidyverse, SpaCy, Tableau, PowerBI

AWARDS

Special Act Award for AI/ML Systems Engineering Leadership, National Institutes of Health (2024)

V360 Award Market Unit Winner, Accenture (2023)

EPIC Award, Accenture (2023)

Distinguished Artist, ArtAscent International Art & Literature Journal (2018-2019)

MIT Supply Chain Excellence Scholarship Award (2016)

Rossin Junior Fellows, Lehigh University (2016)

SELECT PUBLICATIONS

Layered Intelligence: Generative AI Meets Classical Decision Sciences
Presented at Databricks Data+AI Summit and the NIH AI Symposium

2024

Generative AI Updates, ControlNet and NIST Guidance
Baseline, Accenture

2023

Methods in Constrained Community Detection: An Integer Optimization Model and Heuristic Approach for Cohort Creation
IEEE Publication and Presentation for 2021 Eighth International Conference on Social Network Analysis, Management and Security (SNAMS)

2021

CERTIFICATIONS

Neural Networks and Deep Learning Certification
DeepLearning.AI

ICAgile Certified Professional
ICAgile

LANGUAGES

English

Hebrew (fluent)

Spanish (limited)

VOLUNTEERING AND COMMUNITY ENGAGEMENT

Member, Jeté Society
The Washington Ballet (2024-2025)

Volunteer Head Coach
Girls on the Run (2020-2022)

Community Math Tutor
William & Mary (2019-2020)

Rossin Junior Fellow
Lehigh University (2014-2016)