# Todd A. Nitkin

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## Data Scientist | Python, PowerBI, and AI/ML Specialist |Corporate, Health, & Business Data Expert

Results-driven Data Scientist with robust experience in Python, Power BI, SQL, and advanced AI/ML techniques including LLMs, PyTorch, and TensorFlow. Proven expertise in predictive analytics, geospatial modeling (ArcGIS), ETL pipelines, and business intelligence to solve complex problems across health, humanitarian, insurance, corporate, and environmental sectors. Adept in building end-to-end solutions — from data ingestion and modeling to interactive dashboards and stakeholder communication. Known for driving innovation through generative AI, big data integration, and machine learning automation.

### EXPERTISE

### Core Skills & Technologies

- Programming: Python, SQL, Scikit-learn, PyTorch, TensorFlow
- AI/ML: LLMs, XGBoost, LightGBM, NLP, Supervised/Unsupervised Learning
- Data Engineering: ETL, Data Cleansing, Data Warehousing
- Data Visualization: Power BI, ArcGIS, Dash
- Business Intelligence: Predictive Analytics, KPI Reporting
- Tools & Platforms: GitHub, Jupyter, SharePoint
- Domains: Healthcare Claims, Insurance, Global Health, Geospatial Analytics

### Career Highlights, Experimental Design, A/B Testing

✔ AI Innovation: Applied LLM-powered ML models and advanced algorithms (XGBoost, LightGBM) to improve forecasting and decision-making.

✔ Global Impact: Developed Power BI-based Program Information Systems used in over 50 countries.

✔ Technical Leadership: Led predictive analytics projects for public health, government, and nonprofit sectors.

✔ Cross-Sector Experience: Combined clinical expertise with data science to enhance program outcomes.

### PROFESSIONAL EXPERIENCE

### Data Scientist
### IntelliDyne, LLC – Vienna, VA | June 2024 – Present
Lead Python and Power BI developer creating advanced tools for real-time business intelligence and decision support. Utilized large language models (LLMs) and machine learning algorithms (e.g., XGBoost, LightGBM) for predictive analytics and exploratory data analysis. Built Flask applications and Jupyter workflows to streamline internal reporting pipelines. Integrated GIS, ArcGIS, and Power BI to visualize geological and environmental data in accessible formats.
- Built dynamic dashboards and Python pipelines to manage and visualize large geospatial datasets
- Applied LLM-powered solutions for automating data interpretation and reporting
- Conducted advanced ETL, data cleansing, and statistical analysis across multiple data sources
- Customer Segmentation & Lifecycle Analytics
- Collaborated with cross-functional teams to develop data-driven insights supporting lifecycle analytics and customer segmentation strategies
- Contributed to experimental design and pilot evaluations, including A/B testing frameworks for exploratory business initiatives

**Data Scientist, Co-founder**

**Inspire Ethiopia – North Potomac, MD | 2018 – Present**

Co-founder and data analytics lead for education-focused nonprofit. Designed Power BI dashboards and Python tools to track program impact and improve access to education in rural Ethiopia.

- Developed ETL processes and dashboards using Python, SQL, and Power BI
- Leveraged analytics to support fundraising and strategic planning
- Conducted program evaluations with automated reporting tools and SharePoint integration

**Senior Advisor, Data Analyst**

**World Vision International – Washington, DC | Nov 2018 – Oct 2023**

Managed analytics for global public health initiatives. Integrated Python, SQL, and Power BI to drive M&E insights. Built interactive dashboards and authored automated scripts to optimize reporting.

- Designed OLAP cubes and predictive analytics models for health outcomes
- Automated reporting workflows and conducted large-scale data analysis using Python
- Visualized data from tools like SPSS, Kobo Toolbox, and Epi Info in Power BI
- Led program evaluation using segmentation analysis and experimental design for pilot health initiatives

**Director, Data Analyst**

**Medical Teams International – Portland, OR | Nov 2005 – Oct 2018**

Pioneered Power BI-based Program Information System used across 58 countries with 179 different programs. Integrated Python analytics and automated reporting to support M&E in humanitarian programs.

- Built scalable data models and dashboards with Power BI and Python
- Streamlined global data aggregation and reporting systems
- Led predictive modeling projects for healthcare and humanitarian response

**Physician / Owner**

**Silver Spring Ambulatory Surgical Center – Silver Spring, MD | 1989 – 2000**

Founder and operator of a medical practice with two offices, and a certified surgical center. Led healthcare data analysis and billing systems optimization. I retired due to a catastrophic brain injury from which I have now recovered.

- Analyzed healthcare claims data to optimize billing and increase efficiency
- Applied early healthcare analytics and IT tools to support clinical outcomes
- Managed insurance compliance, data workflows, and quality reporting

## EDUCATION

**Master of Public Health** (MPH), Data Analysis and Visualization, Business Intelligence

Johns Hopkins Bloomberg School of Public Health | Baltimore, MD

**Bachelor of Science (BS)**, Mathematics, Statistics, IT

University of Vermont | Burlington, VT

**Physician (DPM)**, **Fellow, American College of Foot and Ankle Surgery (FACFAS)**

Temple Medical School and Georgetown Surgical Residency |Philadelphia and Washington, DC

## PROFESSIONAL DEVELOPMENT

**MIT Professional Education** – Applied Data Science Program

-Certificate in Advanced Data Science: Python, ML, Generative AI, LLM, and Statistical Modeling.

**Targeted Technology Training**

-Certificate in Power BI, SQL, SSIS, and SSRS

## PUBLICATIONS AND RESEARCH

Please see 9 of my published articles at: https://github.com/tnitkin/published-research

For each of the research projects listed in GitHub, I was responsible for:

-- Designing the study, sampling frame, indicators, and questionnaires

-- Planning the methodology, sample sizes, and data collection protocols

-- Building KOBO Toolbox forms and training data collection teams

-- Data cleaning, analysis (Python, STATA, Power BI), and reporting

-- Publishing results and creating al l data visualizations and dashboards

My published, 'LQAS Guide to Parallel Sampling' is considered the global industry standard, widely adopted by major INGOs. I am recognized as a global expert in this quantitative methodology.

## VOLUNTEER EXPERIENCE

- Co-founder and VP of Inspire Ethiopia (see in the Professional Experience section, above)
- Past President (six terms) and Present Member of Rotary International, Potomac-Bethesda Club | 2003 – present
  - Developed and Implemented Rotary Global Grants:
    - Inspire Ethiopia, Creating access to education in rural Ethiopia
    - Believe and Belize, providing for community needs in Belize
    - Joshua House, helping to furnish and supply an orphanage in Addis Ababa, Ethiopia
  - Facilitated local projects
    - Served dinners at Sophia House shelter for women
    - Packed food for distribution and Mana Food
    - Provided scholarships to Montgomery College