

## PROFESSIONAL SUMMARY

Distinguished Polling, Research & Redistricting Professional with 21 years of expertise in survey methodology, consumer insights, voting behavior, and advanced data analysis. Proven track record in designing and implementing comprehensive research studies, managing cross-functional teams, and translating complex data into actionable intelligence. Expert in geospatial analysis, demographic segmentation, and consumer behavior modeling with experience serving major brands, organizations, and political candidates. Regular expert testimony and source on public opinion for journalists, with redistricting analysis used in court cases.

## KEY ACHIEVEMENTS AND IMPACT

### Software Development and Innovation

- Conceived and deployed redistricting software used by thousands of analysts nationwide
- Developed boundary estimation system using incomplete data without ML requirements
- Created econometric simulation platform for humanitarian intervention modeling
- Built comprehensive survey operations platform from RFP through deployment

## CORE COMPETENCIES

**Survey Methodology & Research Design:** Survey Design and Questionnaire Development for Political and Market Research; Sampling Methodology and Statistical Analysis (R, SPSS, Stata, OSCAR); Random Device Engagement (RDE), Text Message, Web Panel, and Live Telephone Calling; Focus Groups and Qualitative Research Methodologies; Meta-analytical Dataset Development for Longitudinal Analysis; Survey Instrument Standardization and Call Methods Optimization; Expert Testimony and Consultation on Research Methodology

**Redistricting & Geospatial Analysis:** Redistricting Software Development and Boundary Estimation Systems; *Geospatial Analysis* (ArcGIS, Quantum GIS, GRASS, OSGeo, PostGIS); Choropleths and Hexagonal Grid Maps for Demographic Visualization; Spatial Clustering and Boundary Estimation without ML Requirements; Census Data Integration and Demographic Mapping; Court Case Analysis and Expert Testimony for Redistricting; Multi-tenant Data Warehouse Design for Electoral Analytics

**Data Analysis & Visualization:** Advanced Statistical Modeling and Analysis (Regression, Clustering, Segmentation); *Data Visualization* (Tableau, PowerBI, Seaborn, Matplotlib, d3.js); Consumer Behavior Analysis and Market Segmentation; Machine Learning and Predictive Modeling for Targeting; *Big Data Analytics* (Spark/PySpark, Hadoop, Snowflake, dbt); Fraud Detection and Entity Resolution Systems; Multi-million Dollar Research Project Management

## PROFESSIONAL EXPERIENCE

### Siege Analytics, Washington, DC | PARTNER 2005 – Present

#### Data, Technology and Strategy Consulting

- Conduct comprehensive quantitative and qualitative research studies using Python, R, SPSS, and Stata for political candidates and organizations
- Architect cloud-based data warehouse solutions on AWS (EC2, RDS, S3) processing billions of records for electoral analytics
- Design scalable ETL pipelines using PySpark, dbt, and PostgreSQL/PostGIS for large-scale geospatial and demographic datasets
- Develop custom analytical tools and algorithms using Python, Pandas, NumPy, and Scikit-learn for fraud detection and spatial clustering
- Manage complex client relationships across political, nonprofit, and technology sectors using Django/GeoDjango web applications

- Lead technical architecture decisions for data-intensive applications using Docker, Git, and modern DevOps practices

## **Helm/Murmuration, Washington, DC | DATA PRODUCTS MANAGER June 2021 – May 2023**

### **Data Platform Development and Team Leadership**

- Conceived and developed framework using Python, Pandas, and PostgreSQL to clean, validate, and normalize government data from Census, BLS, and NCES
- Built multi-tenant data warehouse and data lake using Snowflake, dbt, and AWS for longitudinal analysis across attitudinal, behavioral, demographic, economic and geographical dimensions
- Trained analytical and engineering staff on open source geospatial technology (QGIS, GRASS, OSGeo) for analysis, segmentation, and visualization using Tableau and PowerBI
- Wrote five-year strategic plans for developing data warehouse using Scala, PySpark, and Apache Spark that became basis of company's distinguishing products
- Managed teams of seven to eleven engineers, designers, analysts, and external stakeholders using Agile methodologies and modern DevOps practices

## **Mautinoa Technologies, Washington, DC | SOFTWARE ENGINEER August 2016 – February 2018**

### **Financial Technology and Humanitarian Crisis Solutions**

- Developed SimCrisis, a GeoDjango web application using Python, PostgreSQL/PostGIS, and NetLogo for multi-agent modeling and econometric simulations of crisis economies
- Built modular application using Python, Django, and GRASS accepting rules extensions for ethnic strife, different crisis types, supply failures, and disaster scenarios
- Liaised with officers from International Federation of Red Cross, UNICEF, and Chaos Communications Congress to improve platform using Docker and Ubuntu
- Conceived and built application using Python, Pandas, and Jupyter to predict how crisis economies respond to different humanitarian interventions

## **Myers Research, Washington, DC | SENIOR ANALYST August 2012 – February 2014**

### **Quantitative and Qualitative Research for Democratic Campaigns**

- Developed RACSO, a web application for pollsters to fully administer research including questionnaire creation, versioning, and reporting
- Wrote RFP and analyzed bids from 1,200 vendors before selecting implementation partner
- Built prototype in R for comprehensive polling administration and sample file management
- Provided strategic counsel to Democratic campaigns, political actors, and NGOs through quantitative and qualitative research

## **Progressive Change Campaign Committee, Washington, DC | RESEARCH DIRECTOR August 2011 – August 2012**

### **Political Research and Data Analysis**

- Managed critical research operations for political campaigns
- Conducted comprehensive polling and demographic analysis
- Developed strategic recommendations based on data analysis
- Led research team in support of progressive political initiatives

## **Salsa Labs, Inc., Washington, DC | SOFTWARE ENGINEER January 2011 – August 2011**

### **Political Technology Development**

- Developed software solutions for political campaigns and advocacy groups

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- Built web applications for voter engagement and campaign management
  - Integrated third-party APIs and data sources for campaign tools
  - Collaborated with political strategists to translate requirements into technical solutions

**The Praxis Project, Oakland, CA | INTERIM TECHNOLOGY MANAGER April 2009 – October 2009****Nonprofit Technology Integration**

- Integrated technology solutions within organizational frameworks for social justice organizations
- Developed data management systems for community organizing efforts
- Provided technical training and support to nonprofit staff
- Built custom applications for community engagement and advocacy

**Lake Research Partners, Washington, DC | PROGRAMMER April 2008 – December 2008****Political Research and Data Analysis**

- Developed data analysis tools for political polling and research
- Built statistical models for voter behavior analysis
- Created data visualization tools for research presentations
- Supported senior researchers with technical analysis and reporting

**The Feldman Group, Washington, DC | FIELD DIRECTOR August 2007 – April 2008****Political Field Operations and Data Management**

- Managed field operations for political campaigns and research projects
- Developed data collection and management systems for field work
- Trained field staff on data collection protocols and quality control
- Analyzed field data to inform campaign strategy and research findings