**Dheeraj Chand**

202.550.7110 | dheeraj.chand@gmail.com | https://www.dheerajchand.com | https://www.linkedin.com/in/dheerajchand/

## PROFESSIONAL SUMMARY

Research & Data Professional with 21 years of experience in applied research, data engineering, and software development. Expert in translating complex analytical requirements into scalable technical solutions with proven track record leading cross-functional teams.

## CORE COMPETENCIES

Research and Analytics • Programming and Development • Data Infrastructure

## PROFESSIONAL EXPERIENCE

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

Data, Technology and Strategy Consulting

• Lead comprehensive research initiatives for presidential, gubernatorial, congressional, and senatorial campaigns affecting millions of dollars in strategic spending decisions

• Architect enterprise-scale cloud data warehouse solutions on AWS (EC2, RDS, S3) processing billions of records for electoral analytics and demographic analysis

• Design and implement scalable ETL pipelines using PySpark, dbt, and PostgreSQL/PostGIS for large-scale geospatial and demographic datasets

• Develop advanced analytical tools and machine learning algorithms using Python, Pandas, NumPy, and Scikit-learn for fraud detection and spatial clustering

• Manage strategic client relationships across political, nonprofit, and technology sectors using Django/GeoDjango web applications

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

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

Data Platform Development and Team Leadership

• Conceived and developed comprehensive data framework using Python, Pandas, and PostgreSQL to clean, validate, and normalize government data from Census, BLS, and NCES

• Architected and built multi-tenant data warehouse and data lake using Snowflake, dbt, and AWS processing millions of records with millions of columns for longitudinal analysis across attitudinal, behavioral, demographic, economic and geographical dimensions

• Led training initiatives for analytical and engineering staff on open source geospatial technology (QGIS, GRASS, OSGeo) for analysis, segmentation, and visualization using Tableau and PowerBI

• Developed five-year strategic plans for data warehouse architecture using Scala, PySpark, and Apache Spark that became foundation of company's distinguishing products

• Led cross-functional teams of seven to eleven engineers, designers, analysts, and external stakeholders using Agile methodologies and modern DevOps practices

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

Financial Technology and Humanitarian Crisis Solutions

• Architected and 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

• Collaborated with senior officers from International Federation of Red Cross, UNICEF, and Chaos Communications Congress to enhance platform using Docker and Ubuntu

• Conceived and developed predictive application using Python, Pandas, and Jupyter to forecast how crisis economies respond to different humanitarian interventions

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

Quantitative and Qualitative Research for Democratic Campaigns

• Architected and developed RACSO, a comprehensive web application for pollsters to fully administer research including questionnaire creation, versioning, and reporting

• Led RFP process and analyzed bids from 1,200 vendors before selecting optimal 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 affecting millions of dollars in campaign spending decisions

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

Political Research and Data Analysis

• Conceived, architected, and engineered FLEEM web application using Twilio API for thousands of simultaneous phone calls

• Developed IVR polling system for early quantitative research supporting Senators Martin Heinrich and Elizabeth Warren

• Built tabular and graphical reporting system with Python, GeoDjango, PostGIS, and Apache webserver

• Designed survey deployment system facilitating thousands of simultaneous phone surveys, saving PAC nearly $1 million annually in polling costs

• Significantly increased data collection efficiency through automated calling infrastructure

• Managed comprehensive research operations for progressive political initiatives and candidates

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

Political Technology Development

• Maintained and extended comprehensive geospatial analysis and reporting tools for Java-based CRM system

• Developed custom tile server for Web Map Service (WMS) integration using GeoTools and OpenLayers

• Built advanced geospatial analysis capabilities using Java, JavaScript, MySQL, and TileMill

• Integrated mapping and visualization tools for political campaign data analysis

• Collaborated with political strategists to translate geospatial requirements into technical solutions

### INTERIM TECHNOLOGY MANAGER - The Praxis Project, Oakland, CA | April 2009 – October 2009

Nonprofit Technology Integration

• Led technology operations for multi-million dollar organization while assisting in search for full-time CTO

• Directed all technology decisions and practices for massive multinational non-governmental organization

• Developed comprehensive frameworks for internal and external technology audits

• Led training initiatives for beneficiaries on spatial and Census data analysis for public health research

• Conducted training programs for NGO staff in web development using Drupal, PHP, and MySQL

• Managed technology infrastructure supporting community health initiatives across multiple countries

### PROGRAMMER - Lake Research Partners, Washington, DC | April 2008 – December 2008

Political Polling, Focus Groups and Demographic Analysis for Democratic Campaigns

• Built the first collaborative and multi-actor contributed poll of polls used by the Democratic Party

• Developed system that later became the Polling Consortium Database at The Analyst Institute

• Worked on all aspects of questionnaire design, sampling, reporting and analysis for Congressional, Senate and Presidential elections affecting millions of dollars in campaign spending decisions

• Conducted statistical modeling and analysis using SPSS, ArcGIS, Quantum GIS, GRASS, Stata, OSCAR, PostgreSQL, PostGIS, and Oracle

• Pioneered integration of advanced mapping techniques into standard reports including choropleths and hexagonal grid maps

• Developed innovative approaches to visualizing demographic and market data for enhanced client understanding

### FIELD DIRECTOR - The Feldman Group, Washington, DC | August 2007 – April 2008

Political Polling, Focus Groups and Demographic Analysis for Democratic Campaigns

• Administered all quantitative and qualitative research operations for presidential, gubernatorial, congressional, and senatorial campaigns affecting millions of dollars in spending decisions

• Managed team of 6 research analysts and field staff for comprehensive survey fielding at multi-million dollar research firm

• Developed and implemented data warehousing solutions for efficient storage and retrieval of research findings

• Created custom reports and data visualizations based on specific client requirements

• Introduced mapping and geospatial analysis into standard reporting procedures

• Enhanced value of research deliverables through advanced analytical techniques using SPSS, OSCAR, PHP, and MySQL

## KEY ACHIEVEMENTS AND IMPACT

### Technical Innovation & Platform Development

• Conceived, architected, engineered and deployed cloud-based redistricting software used by thousands of analysts nationwide

• Built the first collaborative and multi-actor contributed poll of polls used by the Democratic Party

• Developed RACSO platform for pollsters to fully administer research, analyzing bids from 1,200 vendors

• Engineered FLEEM system using Twilio API for thousands of simultaneous phone calls for IVR polls

• Created SimCrisis platform for humanitarian intervention modeling used by International Red Cross and UNICEF

• Developed boundary estimation system using incomplete data without ML requirements

### Data Engineering & Analytics

• Designed, architected and created multi-tenant data warehouse tracking decades of political, geographical, econometric change

• Modernized legacy ETL processes by implementing dbt and PySpark workflows, reducing processing time by 57%

• Developed advanced data pipelines for machine learning applications enhancing consumer segmentation and predictive modeling

• Built fraud detection systems for campaign finance data analysis across multi-terabyte datasets

• Transformed small data team into big data engineering team using Hadoop Clusters and Hive on AWS

• Introduced version control and Agile methodologies, improving project delivery timelines by 40%

### Research Leadership & Client Success

• Led multi-million dollar research projects involving sensitive consumer data with privacy compliance

• Managed teams of seven to eleven engineers, designers, analysts, and external stakeholders

• Delivered actionable consumer insights and market intelligence for political candidates and major organizations

• Built comprehensive survey operations platform from RFP through deployment

• Regular expert testimony and source on public opinion for journalists, elected officials, and NGO leadership

• Redistricting analysis used in court cases with rigorous methodology and expert testimony

## TECHNICAL SKILLS

RESEARCH AND ANALYTICS Survey Methodology; Statistical Analysis; Geospatial Analysis; Data Visualization; Research Management

PROGRAMMING AND DEVELOPMENT Python; JVM Languages; Web Technologies; Database Languages; Statistical Computing

DATA INFRASTRUCTURE Cloud Platforms; Big Data; Databases; Geospatial; DevOps