**Dheeraj Chand**

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## PROFESSIONAL SUMMARY

Data scientist and software engineer with 15+ years building systems that matter. Discovered 2.7M misclassified voters, saved organizations $4.7M through better algorithms, and built platforms used by thousands of analysts nationwide. Expert in translating complex analytical requirements into scalable technical solutions.

## CORE COMPETENCIES

Programming and Development • Data Infrastructure • Research and Analytics • PLATFORMS • TRACK

## PROFESSIONAL EXPERIENCE

### Partner - Siege Analytics (Austin, TX) | 2020 - Present

Data Science & Political Analytics

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

• Uncovered decades of demographic miscoding in voter files, discovering 2.7M previously mischaracterized Democratic voters

• Developed Python boundary estimation algorithm enabling mapping and analysis at every level of election in the United States

• Algorithm reduced mapping costs by 73.5%, saving campaigns and organizations $4.7M and enabling smaller nonprofits to conduct redistricting analysis

• Architect enterprise-scale cloud data warehouse solutions on AWS processing billions of records for electoral analytics

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

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

### Senior Data Scientist - Lake Research Partners (Washington, DC) | 2018 - 2020

Political Research & Analytics

• 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 in campaign spending decisions

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

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

• Trained staff on building Python tooling for report generation and analysis

### Technical Director - The Praxis Project (Oakland, CA) | 2015 - 2018

Technology & Data Infrastructure

• 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

• 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

• Architected and developed 25 Drupal sites to integrate with membership databases, activism CRMs and government agencies, under guidelines from Kellogg Foundation and Robert Wood Johnson Foundation

### Senior Software Engineer - Salsa Labs (Washington, DC) | 2012 - 2015

CRM & Data Platform Development

• Maintained and extended comprehensive geospatial analysis and reporting tools for Java-based CRM system used by tens of thousands of users simultaneously

• Developed custom tile server for Web Map Service (WMS) integration using GeoTools and OpenLayers, enabling interactive visualization of CRM and Census data that improved contact rates by 53% and segmentation accuracy by 88%

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

• Integrated mapping and visualization tools for political campaign data analysis interfacing with Government and Activism APIs

• Handled billions of records with millions of columns in high-performance CRM system

### Research Director - PCCC (Washington, DC) | 2010 - 2012

Political Research & Data Analysis (FLEEM System)

• Conceived, architected, and engineered FLEEM web application using Twilio API handling tens of thousands of calls using emulated predictive dialer for regulated political surveys

• 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 $840K in operational costs plus millions in avoided software licensing through completely self-built system

• Managed comprehensive research operations for progressive political initiatives and candidates

### Data Analyst - The Feldman Group (Washington, DC) | 2008 - 2010

Political Data Analysis

• 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

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

## KEY PROJECTS

### Ballista Redistricting Platform (2020 - Present)

Cloud-based GeoDjango platform for redistricting analysis with real-time collaborative editing and Census integration, used by thousands of analysts nationwide

Technologies: GeoDjango, PostGIS, AWS, Docker, React, Python

Impact: Reduced mapping costs by 73.5%, saving organizations $4.7M in operational expenses

### FLEEM Political Survey System (2010 - 2012)

Web application using Twilio API for regulated political surveys, handling tens of thousands of simultaneous calls

Technologies: Twilio API, PHP, MySQL, JavaScript, Drupal

Impact: Saved PAC $840,000 annually in polling costs

### Multi-tenant Data Warehouse (2015 - 2018)

Longitudinal analysis platform across attitudinal, behavioral, demographic, and geographical dimensions

Technologies: PostgreSQL, Python, Django, D3.js, Tableau

Impact: Processed billions of records for electoral analytics and demographic analysis

### Polling Consortium Dataset Meta-Analysis (2013 - 2016)

Comprehensive meta-analysis of polling data from tens of polling and mail firms with different methodologies and encoding systems, creating unified analytical framework

Technologies: Python, R, Statistical Analysis, Meta-Analysis, Data Standardization

Impact: Created $400M dataset that became foundation for modern electoral analytics, estimated current value exceeds $1B

## KEY ACHIEVEMENTS AND IMPACT

### Impact

• Discovered 2.7M misclassified Democratic voters through data analysis

• Saved organizations $4.7M with algorithm that reduced mapping costs by 73.5%

• Built redistricting platform used by thousands of analysts nationwide

• Delivered $4.9M additional revenue through continuous testing and optimization

• Increased lead conversion rates by 23% and operational efficiency by 19%

### Scale

• Handled billions of records with millions of columns for tens of thousands of users

• Architected cloud-based GeoDjango platform with real-time collaborative editing

• Conducted polling for presidential, gubernatorial, and congressional campaigns

• Managed teams of 7-11 engineers, designers, and analysts across multiple initiatives

## TECHNICAL SKILLS

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

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

RESEARCH AND ANALYTICS Survey Methodology; Statistical Analysis; Machine Learning; Geospatial Analysis; Research Management

PLATFORMS Tableau; Power BI; Jupyter

TRACK Git; Jira

For a more detailed, full description of my experience, please visit my LinkedIn and Personal Site.