dheeraj.chand@gmail.com
+1 2025507110
GitHub: github.com/dheerajchand

Dheeraj Chand

Austin, TX (30.2672°N, 97.7431°W)

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.

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

Research and Analytics: *Survey Methodology* (Design, sampling, weighting, longitudinal analysis); *Statistical Analysis* (Regression modeling, clustering, segmentation, machine learning); *Geospatial Analysis* (Spatial clustering, boundary estimation, demographic mapping); *Data Visualization* (Tableau, PowerBI, d3.js, Matplotlib, Seaborn, choropleth mapping); *Research Management* (Team leadership, methodology design, stakeholder communication)

Programming and Development: *Python* (Django/GeoDjango, Flask, Pandas, PySpark, SciKit-Learn, TensorFlow); *JVM Languages* (Scala (Spark), Java, Groovy); *Web Technologies* (JavaScript, React, d3.js, PHP, HTML/CSS); *Database Languages* (SQL, T-SQL, PostgreSQL/PostGIS); *Statistical Computing* (R, SPSS, SAS, Stata)

Data Infrastructure: *Cloud Platforms* (AWS (EC2, RDS, S3), Google Cloud Platform, Microsoft Azure); *Big Data* (Apache Spark, PySpark, Hadoop, Snowflake, dbt); *Databases* (PostgreSQL/PostGIS, MySQL, Oracle, MongoDB, Neo4j); *Geospatial* (ESRI ArcGIS, Quantum GIS, GeoServer, OSGeo, GRASS); *DevOps* (Docker, Git, CI/CD pipelines, automated testing, version control)

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
- 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