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

Dheeraj Chand

[RESEARCH, ANALYSIS, ENGINEERING] → UNDERSTANDING

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

Conceived, architected, engineered and deployed cloud-based redistricting software used by thousands of analysts nationwide • Designed, architected and created multi-tenant data warehouse tracking decades of political, geographical, econometric change • Led multi-million dollar research projects involving sensitive consumer data with privacy compliance

CORE COMPETENCIES

Software Engineering • Data Engineering • Data Analysis • Geospatial / Demographic Expertise • Research & Analytics • Programming & Development • Data Infrastructure

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

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

Dheeraj Chand

[RESEARCH, ANALYSIS, ENGINEERING] → UNDERSTANDING

Austin, TX (30.2672°N, 97.7431°W)

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

- 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
- Significantly increased data collection efficiency through automated calling infrastructure
- Managed comprehensive research operations for progressive political initiatives and candidates

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

Political Technology Development

- Maintained and extended entire 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 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

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

Nonprofit Technology Integration

- Assisted in search for full-time CTO while performing all programmatic technology roles for multi-million dollar organization

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

Dheeraj Chand
[RESEARCH, ANALYSIS, ENGINEERING] → UNDERSTANDING
Austin, TX (30.2672°N, 97.7431°W)

- Made all technology decisions and practices for massive multinational non-governmental organization
- Wrote comprehensive frameworks for internal and external technology audits
- Trained beneficiaries on spatial and Census data analysis for public health research
- Trained NGO staff in web development using Drupal, PHP, and MySQL
- Managed technology infrastructure supporting community health initiatives across multiple countries

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

Political Research and Data Analysis

- 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
- 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

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

Political Field Operations and Data Management

- Administered all quantitative and qualitative research operations ensuring reporting accuracy
- Managed comprehensive survey fielding for 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

TECHNICAL SKILLS

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)