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

Senior Data Analysis & Analytics Professional with 21 years of expertise in statistical analysis, machine learning, and big data processing. Proven track record in designing and implementing comprehensive data analysis solutions, managing cross-functional teams, and translating complex data into actionable intelligence. Expert in advanced statistical modeling, predictive analytics, and data visualization with experience serving major brands, organizations, and political candidates. Deep specialization in fraud detection, entity resolution, and pattern analysis across multi-terabyte datasets.

KEY ACHIEVEMENTS AND IMPACT

Developed parametric spatial clustering algorithms for voter analysis, resulting in 88% improved targeting efficacy • Built multi-tenant data warehouse and data lake using Snowflake, dbt, and AWS for longitudinal analysis • Built the first collaborative and multi-actor contributed poll of polls used by the Democratic Party

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

Advanced Data Analysis and Statistical Modeling

- Developed and deployed custom analytical tools and algorithms using Python, Pandas, NumPy, and Scikit-learn for fraud detection and spatial clustering
- Developed parametric spatial clustering algorithms for voter analysis, resulting in 88% improved targeting efficacy
- Developed meta-analytical techniques to resolve ambiguous dimensions, resulting in discovery of 170% more viable targets
- Created fraud detection systems for campaign finance data analysis across multi-terabyte datasets
- Built multi-tenant data infrastructure supporting concurrent access from diverse client organizations
- Led multi-million dollar research projects involving sensitive consumer data, ensuring compliance with privacy regulations

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

Big Data Analytics and Machine Learning

- 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
- Modernized legacy ETL processes by implementing dbt and PySpark workflows, reducing processing time by 57%
- Developed advanced data pipelines for machine learning applications that enhanced consumer segmentation and predictive modeling capabilities
- Trained analytical and engineering staff on open source geospatial technology (QGIS, GRASS, OSGeo) for analysis, segmentation, and visualization
- 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)

GSD&M;, Austin, TX | ANALYTICS SUPERVISOR November 2019 – June 2020

Data Science and Business Intelligence

- Transformed the small data team into a big data engineering team, going from working on small datasets on laptops to using Hadoop Clusters and Hive on AWS
- Implemented spatial analysis and consumer segmentation methodologies that revealed new insights about existing customers
- Introduced version control and Agile methodologies to the data team, improving project delivery timelines by 40%
- Managed three analysts, mentoring them in advanced market research techniques and data analysis
- Rewrote the mission and offerings of the department and drafted a plan for how it would integrate with the rest of the strategy team
- Managed accounts for United States Air Force, Southwest Airlines/Chase and Indeed with focus on data-driven insights

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

Data Science and Econometric Modeling

- 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
- Conceived and built application using Python, Pandas, and Jupyter to predict how crisis economies respond to different humanitarian interventions
- Liaised with officers from International Federation of Red Cross, UNICEF, and Chaos Communications Congress to improve platform using Docker and Ubuntu
- Applied agent-based modeling, statistical analysis and machine learning systems for humanitarian impact assessment
- Developed data models and processing pipelines for sensitive humanitarian data

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

Statistical Analysis and Research Methodology

- Designed comprehensive survey instruments for specialized voting segments and niche markets
- Developed sophisticated analytical products and reports that delivered actionable insights to clients
- Co-developed RACSO web application to manage all aspects of survey operations, from instrument design to data collection and analysis
- Introduced geospatial techniques to enhance market segmentation capabilities, providing clients with location-based consumer insights
- Standardized reporting methodologies to improve clarity and impact of research findings
- Conducted statistical modeling and analysis to address multifaceted consumer behavior questions

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

Data Analysis and Statistical Computing

- Worked on all aspects of questionnaire design, sampling, reporting and analysis for political actors in Congressional, Senate and Presidential elections
- Built the first collaborative and multi-actor contributed poll of polls used by the Democratic Party and affiliated actors

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

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

- Conducted statistical modeling and analysis to address multifaceted consumer behavior questions
- Pioneered the integration of advanced mapping techniques into standard reports, including choropleths and hexagonal grid maps
- Developed innovative approaches to visualizing demographic and market data, enhancing clients' understanding of research findings
- Supported senior researchers with technical analysis and reporting using advanced statistical methods and data processing

TECHNICAL SKILLS

STATISTICAL ANALYSIS & MACHINE LEARNING *Advanced Statistical Modeling* (Regression, Clustering, Segmentation, Machine Learning); *Predictive Analytics* (Time Series Analysis, Forecasting, Risk Modeling); *Data Mining* (Pattern Recognition, Anomaly Detection, Entity Resolution); *Machine Learning* (SciKit-Learn, TensorFlow, PySpark, Spark MLlib); *Statistical Computing* (R, Python (Pandas, NumPy), SPSS, SAS, Stata); *A/B Testing* (Experimental Design, Statistical Significance Testing); *Meta-analytical Techniques* (Dimensional Analysis, Ambiguity Resolution)

BIG DATA & DATA ENGINEERING *Big Data Processing* (Apache Spark, PySpark, Hadoop, Snowflake, dbt); *Data Warehousing* (Multi-tenant Architecture, ETL/ELT Pipelines); *Cloud Platforms* (AWS (EC2, RDS, S3), Google Cloud Platform, Microsoft Azure); *Databases* (PostgreSQL/PostGIS, MySQL, Oracle, MongoDB, Neo4j); *Data Governance* (Quality Control, Privacy Compliance, Security); *Streaming Data* (Real-time Processing, Kafka Integration, Event-driven Architectures); *Data Pipeline Optimization* (Performance Tuning, Scalability, Monitoring)

DATA VISUALIZATION & REPORTING *Data Visualization* (Tableau, PowerBI, Seaborn, Matplotlib, d3.js); *Geospatial Analysis* (ArcGIS, Quantum GIS, GRASS, OSGeo, PostGIS); *Interactive Dashboards* (Real-time Analytics, Custom Reporting); *Statistical Reporting* (Automated Report Generation, Data Storytelling); Choropleths and Hexagonal Grid Maps for Demographic Visualization; *Business Intelligence* (KPI Development, Performance Metrics); *Client Presentation* (Executive Briefings, Technical Documentation)