**Dheeraj Chand**

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## PROFESSIONAL SUMMARY

Senior Software Engineer with 21 years of experience in full-stack development, data engineering, and scalable web applications. Expert in Python, Drupal (4-10), GeoDjango, Flask, and cloud architecture with proven track record building enterprise-scale systems.

## CORE COMPETENCIES

Programming Languages • Frameworks & Platforms • Data & Analytics

## PROFESSIONAL EXPERIENCE

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

Full-Stack Development and Data Engineering

• 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 Technology Development and Research Operations

• 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

• Managed comprehensive research operations for progressive political initiatives and candidates

### 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

## EDUCATION

### Master of Arts in Political Science - University of California, Berkeley

### Bachelor of Arts in Political Science - University of California, Berkeley

## TECHNICAL SKILLS

PROGRAMMING LANGUAGES Python; PHP; JVM Languages; Web Technologies; Database Languages

FRAMEWORKS & PLATFORMS Web Frameworks; Frontend; Cloud Platforms; Big Data; DevOps

DATA & ANALYTICS Statistical Computing; Databases; Geospatial; Machine Learning; Data Visualization

20+ years of Drupal development experience across versions 4-10Expert in GeoDjango for geospatial web applicationsProficient in Flask for lightweight web applications and APIsExtensive experience with Python web frameworks and data science librariesStrong background in cloud architecture and DevOps practices