dheeraj.chand@gmail.com
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GitHub: github.com/dheerajchand

Dheeraj Chand

[RESEARCH, ANALYSIS, ENGINEERING] → UNDERSTANDING

Austin, TX (30.2672°N, 97.7431°W)

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

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

PROFESSIONAL EXPERIENCE

Siege Analytics, Washington, DC | PARTNER 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

Helm/Murmuration, Washington, DC | DATA PRODUCTS MANAGER 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

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Mautinoa Technologies, Washington, DC | SOFTWARE ENGINEER 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

Myers Research, Washington, DC | SENIOR ANALYST 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

Progressive Change Campaign Committee, Washington, DC | RESEARCH DIRECTOR 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

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The Praxis Project, Oakland, CA | INTERIM TECHNOLOGY MANAGER 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

For a more detailed, full description of my experience, please visit my LinkedIn (https://www.linkedin.com/in/dheerajchand/) and Personal Site (https://www.dheerajchand.com).

TECHNICAL SKILLS

PROGRAMMING LANGUAGES *Python* (Django/GeoDjango, Flask, Pandas, PySpark, SciKit-Learn, TensorFlow, FastAPI); *PHP* (Drupal 4-10, Custom modules, themes, and API development); *JVM Languages* (Scala (Spark), Java, Groovy); *Web Technologies* (JavaScript, React, d3.js, HTML5/CSS3, TypeScript); *Database Languages* (SQL, T-SQL, PostgreSQL/PostGIS, MySQL, Oracle)

FRAMEWORKS & PLATFORMS *Web Frameworks* (Django/GeoDjango, Flask, FastAPI, Drupal 4-10); *Frontend* (React, d3.js, jQuery, Bootstrap, Tailwind CSS); *Cloud Platforms* (AWS (EC2, RDS, S3, Lambda), Google Cloud Platform, Microsoft Azure); *Big Data* (Apache Spark, PySpark, Hadoop, Snowflake, dbt); *DevOps* (Docker, Git, CI/CD pipelines, automated testing, version control)

DATA & ANALYTICS *Statistical Computing* (R, SPSS, SAS, Stata, Python (Pandas, NumPy)); *Databases* (PostgreSQL/PostGIS, MySQL, Oracle, MongoDB, Neo4j); *Geospatial* (ESRI ArcGIS, Quantum GIS, GeoServer, OSGeo, GRASS); *Machine Learning* (Scikit-learn, TensorFlow, PyTorch, XGBoost); *Data Visualization* (Tableau, PowerBI, d3.js, Matplotlib, Seaborn)