Anudeep Vanjavakam

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Professional Summary

Transformational Lead Data Scientist with 10+ years driving $MM+ business impact through full-stack analytical solutions, team leadership, and strategic data product development. Proven track record building high-performing analytics solutions, establishing data-driven cultures, and delivering enterprise-grade products for 180K+ users. Expert in stakeholder engagement and cross-functional leadership with deep expertise in R, Python, SQL, ETL, ML/AI, and cloud data infrastructure. Spearheaded data science initiatives, automated critical business processes, and built world-class analytics capabilities for internal and external teams.

Work experience

Moulton Niguel Water District, CA, US (Top workplace in OC)

Principal Data Analyst   2025 Jun - present

- Led the District's 217M+ O&M and CIP budgeting analytics lifecycle, building executive-grade financial models, orchestrated stakeholder alignment across 45+ departments, automating QA/QC tools that cut 3+ hours per iteration, and earned Board recognition in achieving the GFOA Triple Crown Award
- Built end-to-end ETL pipelines ingesting incremental energy usage & billing data (Utility API → AWS Postgres), powering $3M+ energy forecasting, peak/off-peak optimization, and org-wide BI tools.
- Engineered an automated ETL framework for customer portal (180K+ users) upgrade (v8→v11), delivering daily data syncs from ERP SQL Server and saving $65K in integration consulting.
- Co-built and launched a Power BI Budget Tracker, integrating real-time ERP data to eliminate manual PDF monitoring and empower 45+ departments with self-service financial insights visibility — enhancing accountability, saving hours of effort, and improving budget management efficiency.
- Designed and deployed an interactive dashboard (R, SQL, Posit Connect) that automated month-end GL allocation of unbilled receivables by pulling live data, calculating fund splits using dynamic parameters, and eliminating 40+ hours of manual accounting effort per close cycle.
- Established best practices, internal tools & templates, and peer review processes for 3+ data analysts.

Moulton Niguel Water District, CA, US (Top workplace in OC)   2020 Jul – 2025 May

Senior Data Analyst

- Led short and long-range financial planning with C-suite executives, reducing 40% of manual processes, resulting in AAA rating (Fitch, S&P) and GFOA Award for the company
- Built and deployed R Shiny apps, leading to a reduction in customer bill and rebate inquiries by 22% improving customer satisfaction (Bill Calculator, ET Map, Rebate Estimator, Outdoor Water Budget)
- Strengthened financial reporting tools to monitor $100MM+ investments and cash flow trends, saving almost $2.5M annually
- Implemented a Python-based anomaly detection model to detect (up to 3 months early) meters at risk of failure, resulting in savings of $44K per month
- Managed $350K customer acquisition budget through advanced behavioral analytics, optimizing marketing spend and retention strategies
- Partnered with IT to redesign SQL indices that resulted in a 36% reduction in query processing times, creating a better user experience for staff (internal reporting) and customers (website apps)
- Informed Rate Setting for 32 agencies in California by developing an R-Shiny app that generates correlation insights between rate change, surcharge, revenue, and customer bills

Moulton Niguel Water District, CA, US   2016 Aug – 2020 Jun

Data Analyst

- Improved the efficiency of annual financial reporting by 85% using an Excel model, achieving the 'Certificate of Achievement for Excellence in Financial Reporting' GFOA award
- Automated rate-bill verification process resulting in an 86% reduction in manual effort while maintaining a 100% billing accuracy
- Built a 'Bill Guardian' monitoring system that flags discrepancies between the enterprise billing system and vendor portal, saving $68K

Skills

Leadership & Strategy: Stakeholder Management, Team Building & Mentorship, Cross-functional Collaboration, Product Strategy, Executive Presentation
Languages: Python, R, SQL, Bash, Git/GitHub
Data Engineering: ETL pipelines, data modeling, APIs, Prefect/Airflow, dbt
Cloud & Infrastructure: AWS (Redshift, S3, EC2, Athena), BigQuery, PostgreSQL, SQL Server, Posit Connect
ML/AI: Scikit-learn, PyTorch, NLP, Transformers, Predictive modeling, Anomaly Detection
Analytics & Visualization: Power BI, Tableau, R Shiny, Streamlit, Flask
Business Intelligence: A/B Testing, Statistical Analysis, Excel Modeling

Education

Arizona State University - W.P. Carey School of Business, Tempe, AZ   2015 - 2016
Master of Science (MS-BA)
Business Analytics (GPA 3.97/4)

SRM University, Chennai, India   2009 - 2013
Bachelor of Technology
Major in Computer Science and Engineering (GPA 8.02/10)

Portfolio

Best Products on Reddit: App to search for top-voted products based on Named Entity Recognition and Sentiment Analysis
Rate Comparison: An R-Shiny tool to easily understand and compare the implications of different rate structures
Disaster Response ML Pipeline: Displays categorized events for directing messages to suitable disaster relief agencies based on user inputs
Article Recommendation System: Article recommendations for users based on their interactions on IBM Watson Studio

Certifications

- Data Scientist Nanodegree – Udacity
- Machine Learning by Stanford University – Coursera
- AI Programming with Python Nanodegree – Udacity
- AWS Machine Learning Foundations - Udacity

Publications

The Next Frontier: Individualized Rates Based on Cost of Service, American Water Works Association Journal, Nov 2022