

# Ashrith Reddy

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## Professional Summary

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A Full-Stack Data Scientist with 6-year experience delivering pioneering data-driven business solutions for Fortune-500 clients and high-growth startups. Highly proficient in Machine Learning, Engineering, and Statistics, coupled with a proven ability to collaborate with diverse stakeholders to spearhead Analytics adoption in various industries. Adept at aligning Data Science initiatives with business objectives to shape and execute novel strategies that elevate customer experience.

## Work Experience

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### Lead Data Scientist

**Global Home Improvement Retailer** via *TheMathCompany, Austin USA* 03/2024 – Present

- Pioneered a **Dynamic Pricing Strategy** to increase retail media margin from 20% to est. 40% via intelligent campaign interventions & margin allocations, while delivering palatable ROAS to advertisers.
  - Built consensus among cross-functional teams; and integrated predictive analytics to estimate Facebook Ads' CPM & revenue attributable to campaigns, and **magnifying advertising efficiency**.
  - Developed a live dashboard to monitor the intervention performance and assess go-to-market strategy, providing real-time insights and driving subsequent strategic decisions for high-value advertisers.

### Lead Data Scientist

**Largest Global Omnichannel Retailer** via *TheMathCompany, Tallahassee USA* 09/2022 – 01/2024

- Accelerated Analytics maturity of Emerging Technologies **Augmented Reality product** division, bridging a pivotal 4-year go-to-market gap with Amazon and laying a robust foundation for team expansion.
  - Architected and constructed fault-tolerant data pipelines to capture Augmented Reality events amidst **billions of clickstream events**, increasing coverage 120-fold and kickstarting decisive product analytics.
  - Developed self-serve Analytics Dashboards for 40-50 stakeholders (developers, PMs, UI/UX designers, finance, merchants and other partners) enabling real-time assessment of Virtual Reality product health.
  - Spearheaded and enriched the data with external sources for a robust comprehensive analytical foundation.
  - Deployed a **GenAI solution** to meet senior leadership's need for rapid insights from verbal queries, bypassing traditional Analytics processes to accelerate product decision-making.
  - Renovated the infrastructure & instituted best practices to trim computing cost by 35-45%.
  - Established **data governance systems** to evaluate incoming data, leading to a 75% TAT reduction.

### Data Science Research Intern

**Co.Dx** via *TheMathCompany, Chicago USA* 01/2022 – 05/2022

- Identified the gap in machine learning codebase and developed a Bayesian Regression framework from scratch.
  - Utilizing my growing expertise as a statistics student, engineered the plug-and-play model to cater to a variety of use cases, while ensuring compatibility with the expansive suite of in-house ML products.
  - **Re-engaged by TheMathCompany** in a new geography, building on trust established during prior roles.

### Senior Data Scientist

**National Apparel Conglomerate** via *TheMathCompany, Bengaluru India* 06/2017 – 04/2020

- Estimated **optimum price** for women apparel brand to scientifically uncover the price-demand relationships & drivers of sales. Incorporated the novel quantitative pricing framework that enhanced bottom-line by 15%.
  - Guided the vision and championed scaling this quantitative solution to 6 subsidiary brands, streamlining national pricing operations, and empowering them seamlessly optimize pricing strategies.
- **Segmented customers** of youth apparel brand based on product affinity and purchase behavior patterns.
  - Developed & delivered transformative recommendations that led to highly targeted marketing strategies, boosting promotion redemption rate by 35% and dramatically strengthened customer engagement.
  - Entrusted with delivering the winning solution, this also led to a 6-month budget extension **critical for the nascent startup**, solidifying a strategic partnership and opening new avenues for collaboration.
- Uncovered and executed **product enhancement opportunities** for leading Education-Tech firm that **unlocked novel revenue streams**, proactive customer retention strategies and increased revenue by 8%.
  - Identified drivers of applicants' admission and enrollment in US medical schools to pre-determine the odds.
  - Designed & developed a live ML-driven dashboard, enabling proactive interventions & customer retention.
  - This also fostered a data-driven mindset among my clients, transforming their approach to problem-solving.

### Decision Scientist

**Global Sports Broadcasting Network** via *Mu Sigma, Bengaluru India* 08/2015 – 04/2017

- Liaised Ad-monetization team to **revolutionize digital advertising** by emotional targeting of sports fans. Lauded by **the Wall Street Journal** upon achieving upto 50% increase in click-through rates.
  - Culturally acclimated to enumerate & rank notable emotion-evoking events in major American leagues.

- Initiated a transformative overhaul of legacy systems using RFM Behavioral Segmentation, amplifying the accuracy of identifying viewers' favorite teams by 32%, achieving finer audience targeting.
- Achieved 86% accuracy in categorizing games as Tight, Predictable, or Blowout, **unlocking ad monetization avenues** by enabling key ad real estate to be priced differentially based on game tension.

## Education

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- **M.S. in Statistics**, *Florida State University, Tallahassee USA* 07/2020 – 07/2022
- **B.S. in Electrical Engineering**, *National Institute of Technology, Karnataka India* 08/2011 – 05/2015
- **Notable Courses**: *Deep Learning in Python, OpenAI API, Engineering Optimization, Algorithms Design & Analysis, Applied Machine Learning, Developing AI Applications*

## Technical Skills

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- **Programming**: Python, SQL, R
- **Machine Learning & Statistics**
  - Classification: Naive Bayes, Trees, Nearest Neighbors, Support Vector Machines, Logistic Regression
  - Regression: OLS, Bayesian, Penalized/Regularised
  - Deep Learning: Multi-layer Perceptron, CNN, RNN, GAN, Autoencoder, LSTM
  - Ensemble Methods: Random Forest, GBT, AdaBoost, XGBoost, Voting, Stacking, Meta-Classifer
  - Unsupervised Learning: Clustering methods, Principal Component Analysis, Association Rule Mining
  - Experimental Design: Hypothesis Testing, z-test, t-test, ANOVA, chi-square, A/B testing, Randomization methods, Propensity Score Matching, DiD, Power Analysis, Bonferroni Correction
- **Problem Domains**
  - Marketing Analytics: Promotion Affinity, Targeted Advertising, Price Optimization
  - Customer Analytics: Survival Analysis, Churn Analysis, Customer Segmentation, Channel Attribution
  - Product/Web Analytics: Conversion Funnel, Behavioral Analytics, Cohort Analysis
- **Data Engineering**: GCP DataProc, AWS EC2, Vertex AI, Hadoop, Hive, Apache Spark, Airflow
- **Business Intelligence**: Looker, Tableau, R-shiny, BigQuery, Plot.ly, GGplot2, matplotlib, NumPy, Pandas

## Personal Projects

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- **TechTributes Poetry Bot**: Developed a Twitter bot that posts daily poems about tech visionaries.
  - Leveraged OpenAI API to generate creative poems celebrating influential figures in technology.
  - Automated posting schedule using Twitter API to engage followers with fresh content daily.
- **Insight Interceptor**: Developed a tool which uses openAI API to monitor user sentiment on X.
  - Triggered alerts for negative sentiment, enabling proactive response strategies.
  - Integrated analytics to categorize sentiment by topic, providing insights into specific areas of concern.
- **Bot Barrier**: Developed a plug-and-play module to detect bot activity in clickstream data using heuristics.
  - Analyzed user behavior to distinguish between human and bot interactions with minimal input required.
  - Designed to optimize resource allocation & improve analytics accuracy by filtering out non-human traffic.

## Accomplishments

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- **GenAI & Automation**
  - GenAI Preparedness: Initiated and upskilled a team of 60 on custom GPTs, plugins, and prompt engineering to establish a GenAI-first culture.
  - Advanced Financial Insights: Developed a bot using OpenAI API to summarize and email 10k-10q statements to clients, enhancing the value proposition of my firm.
- **Training & Mentorship**
  - Mentorship: Developed and delivered comprehensive coursework to mentor 700 trainees in coding best practices, SQL, Advanced-R, and Data Analysis in Python.
  - Retail Industry: Trained a team of 22 on critical retail terminology, KPIs, and latest GenAI applications essential for business analysts, enhancing their industry knowledge and consulting skills.
- **Operational Excellence**
  - Operational Excellence: Executed and standardized best practices across the portfolio, leading to streamlined workflows, increased operational efficiency, and bolstered team productivity.
  - Consulting Culture: Played a key role in the core team responsible for setting the consulting culture, fostering a collaborative learning environment.
  - Client and Employee Engagement: Developed and deployed a comprehensive periodic survey to gauge the pulse of my team and client stakeholders, resulting in overall engagement.
- **Community Engagement**
  - StackOverflow Contributor: Achieved top 9% and 7% rankings on the leaderboard for 2022 Q1 and Q2.
  - R Libraries: Implemented R libraries to streamline data wrangling, automate ISO date format detection and visualize Wikipedia page networks.