



Nikhil Vidhani

Lead Data Scientist, Target Corporation

Executive Summary

- Architected end-to-end simulation capabilities for order allocation and available-to-promise systems impacting 3% of all digital sales (\$600+Mn).
- Independently designed and implemented a new consolidation algorithm projected to save \$20Mn+ in shipping costs and drive \$300Mn+ in incremental sales.
- Proven record of transforming complex business challenges into scalable algorithms and simulation platforms that have delivered measurable impact across Target's last-mile and digital fulfillment network — improving speed, accuracy, and cost efficiency enterprise-wide.
- Deep technical expertise in Python, PySpark, R, and SQL, with extensive experience in algorithm design, machine learning, software engineering, and data pipeline development.
- Strong cross-functional leadership, influencing engineering, product, and business stakeholders, and mentoring a high-performing team of data scientists while driving an experimentation culture.
- Formerly led a data science team at WNS, delivering advanced ML solutions for finance and auditing, driving multimillion-dollar operational savings.
- Ph.D. in Finance (IIM Bangalore) and Master's in Engineering (IISc Bangalore), with research presented at top international conferences.

Industry and Research Experience

- Nov 2022 – **Lead Data Scientist, Target Corporation, Bangalore, Team Size: 6.**
- Present
- Building end-to-end simulations for last mile operations including order allocation, available-to-promise, and big-data pipelines.
 - Conceived and developed new algorithms, including a cost-integrated promise speed generation framework projected to save \$20Mn+ in ship costs and drive \$300Mn+ in new sales.
 - Leading product enhancements, releases, fixes, and code reviews across multiple simulation tools with 100+ internal users.
 - Driving engineering implementation of next-gen promise logic, conducting extensive knowledge transfers, and influencing leadership, product, and engineering stakeholders.
 - Engaging cross-functional teams in experiment design, deep-dives, and showcasing simulation capabilities in org-wide presentations.
 - Leading and mentoring a team of senior and junior data scientists through regular 1:1s, sprint reviews, and design discussions — fostering technical excellence and delivery ownership across simulation and analytics initiatives.
- Feb 2022 – **Sr. Group Manager (Data Science), WNS Global Services, Bangalore, Team Size: 7.**
- Nov 2022
- Building F&A analytics/ML apps for payments, collections, reporting, prediction, and auditing functions
 - Maintaining code-base (GitHub), APIs, automating deployment
 - Mentor junior team members and conduct knowledge-sharing sessions

- Jun 2016 – **Research Scholar**, *Indian Institute of Management, Bangalore, IC.*
- Jan 2022
- Extensively researched asset pricing anomalies, examined impact of disagreement on trading volume, analyst forecasts, and 10K document characteristics
 - Undertook comprehensive data collection, cleaning, modelling, and statistical analysis
 - Presented in several conferences. <https://github.com/nik141088/phd-thesis-rmarkdown>
- Jun 2018 – **Primary Instructor**, *Programming and Data Analysis*, Batch Size: 5-40.
- Jan 2022
- Took multiple short/long courses on R programming, data analysis, and LaTeX
 - Instructor Rating: 4.7/5 (<https://github.com/nik141088/applied-R>)
- Jul 2012 – **Software Engineer**, *Cisco Systems, Bangalore, IC.*
- May 2016
- Design, implement, test, review, and documentation of 4G-LTE and WiFi systems
 - High Availability/Redundancy architecture. Network security.

Major Projects

- 2025 – **Consolidation Algorithm Revamp**, *Target.*
- Present
- Designed a new algorithm to replace the existing consolidation logic, integrating cost optimization with delivery speed decisions.
 - Built and validated the new approach using promise and GOA simulators, demonstrating potential savings of \$20Mn+ in shipping costs and \$300Mn+ in incremental sales.
 - Independently implemented, tested, and simulated the end-to-end impact under stringent latency constraints for a customer-facing module.
 - Presented findings to leadership, product, and engineering, influencing adoption and driving the engineering rollout.
 - Conducted multiple knowledge-transfer sessions to bridge design understanding between data science and engineering teams.
- 2023 – **Simulations Capability**, *Target.*
- Present
- Led a team of 4 to design, implement, and maintain a unified simulation tool now used by 100+ users across planning, digital fulfillment, and operations teams.
 - Enabled end-to-end scenario testing by integrating Promise and GOA simulators, supporting joint optimization of delivery speed and shipping cost.
 - Transitioned data ingestion from static to Kafka pipelines, ensuring up-to-date, reliable, and self-sustaining input generation.
 - Established validation mechanisms and pre-run checks within the UI, reducing user debug and support time by 50%.
 - Oversaw three major and eight minor releases in 2025, introducing automated accuracy measurement and reporting frameworks.
- 2024 – **Promise Simulator**, *Target.*
- Present
- Developed an Available-to-Promise (ATP) simulator from scratch—covering algorithm design, product discussions, interface design, and deployment automation.
 - Validated and improved model accuracy from 50% to 85% through large-scale testing against production data.
 - Identified early use cases influencing 3% of all Target digital orders (\$600Mn+).
 - Actively leveraged by fulfillment optimization, engineering, and supply chain planning teams.
- 2023 – **Selected Past Projects**, *Target, WNS, IIMD, and Personal.*
- 2024
- Here is a selected list of my projects that I am not actively working on. github.com/nik141088/CV/blob/main/selected_past_projects_CV.pdf

Tools and Skills

- Advanced **Programming**, *Python, pyspark, hive, R, Shiny, C/C++, Kotlin/Java (basics).*
- Advanced **Machine Learning**, *Regression, Classification, NLP, MLOps (basics), h2o, Deep Learning, Tensorflow, keras.*
- Advanced **Design Principles**, *Data Structures, computational/space complexity, vectorization, functional programming, test-driven development, modular development, network security.*

Advanced	Solutioning , <i>Problem solving, product development, charting solutions, impact discovery, strategic thinking.</i>
Advanced	Engineering , <i>API, plumber (R), debugging, web-scraping, Linux, code review, github, git, Databases, AWS, CI/CD.</i>
Advanced	Visualization and Documentation , <i>ggplot, plotly, R Markdown, streamlit, Latex, MS Office.</i>
Expert	Domain Knowledge , <i>Last Mile Operations Research: available to promise and order allocation, Finance, Accounting, Statistics, Regression Analysis.</i>
Progressive	Leadership/Interpersonal , <i>Mentoring, project scoping/planning/managing, stakeholder management, product leadership, team building, hiring/interviewing.</i>

Education

2016 – 2021	Doctor of Philosophy , <i>Finance and Accounting</i> , Indian Institute of Management, Bangalore. CGPA: 3.64 / 4.00
2010 – 2012	Master of Engineering , <i>Electrical Communication Engineering</i> , Indian Institute of Science, Bangalore. CGPA: 6.4 / 8.0; Project Grade: A
2006 – 2010	Bachelor of Technology , <i>Electronics and Communication Engg.</i> , Bundelkhand Institute of Engg. and Tech., Jhansi (U.P.). Grade: 73.6%
2004 – 2006	Schooling (12th Standard) , <i>Science</i> , C.B.S.E.. Grade: 88.2%

Awards and Honors

2022	Tech Genius , <i>Transforming the Organization</i> , Victory Fleet, WNS Global Services.
2020	Mirae Asset Scholarship (PhD Year 5) , <i>Indian Institute of Management.</i>
2017–2018	Director's Merit List (PhD Year 1 and 2) , <i>Indian Institute of Management.</i>
2016	96.5 percentile , <i>Common Aptitude Test (CAT).</i>
2010	AIR 20/105,000 , <i>Graduate Aptitude Test in Engineering (GATE).</i>
2006–2007	Merit Scholarships , <i>Intermediate Examination and Engineering.</i>

Publications and Conference Presentations

For the complete list of research publications and conference presentations, please refer to:
github.com/nikhil141088/CV/blob/main/publications_CV.pdf